2014 ELP COMPLIANCE STATUS REPORT

Consent Decree No. 1:11-cv-13330-TLL-CEB

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July 31, 2014

The Dow Chemical Company Midland, Michigan 48674

Certified Mail 7011 0470 0002 4909 4242 Certified Mail 7011 0470 0002 4909 4259

Air & Radiation Division EPA Region 5 77 W. Jackson Blvd. (AE-17J) Chicago, IL 60604 Attn: Compliance Tracker

Office of Regional Counsel EPA Region 5 77 West Jackson Blvd. (C-14J) Chicago, IL 60604

Consent Decree No. 1:11-cv-13330-TLL-CEB: 2014 ELP Compliance Status Report

Enclosed is the 2014 ELP Compliance Status Report from The Dow Chemical Company ("Dow"), as required by Section VI. of Consent Decree No. 1:11-cv-13330-TLL-CEB.

If you have any questions regarding this report, please contact Brad Kischnick at 989-638-9602 or email Kischnick@dow.com.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Shari Kennett Michigan Operations Responsible Care Leader 1790 Building, Washington Street Midland, MI 48674 (989) 636-2646

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	, louncyan coo, across	1, 2013 Stite 30, 2023	
itation	Reporting Requirement		
1.53.a	LDAR Personnel	The state of the state involve the non	
	Report how many LDAR Personnel are at the Facility (commonitoring aspects of repairing leaks)?	excluding rejsonilei wiose functions in over the	76
	For each LDAR personnel what is the approximate per	centage of time each such person dedicated to perior	Hing his/her EDAN function
		and the Solar	% of Time for Each Employee
	Role	Number of Employees in that Role	% of Time for Each Employee
	Role Supervisor	1	100
		1 3	100 100
	Supervisor	1 3 1	100 100 100
	Supervisor Inspection and Inventory Technician	1 3 1 1	100 100 100 100
	Supervisor Inspection and Inventory Technician Project Technician	1 3 1	100 100 100 100 5
	Supervisor Inspection and Inventory Technician Project Technician Data Manager	1 3 1 1 7	100 100 100 100 5 10
	Supervisor Inspection and Inventory Technician Project Technician Data Manager On-Call Monitoring Personnel Method 21 Assessor	1 3 1 1	100 100 100 100 5 10
	Supervisor Inspection and Inventory Technician Project Technician Data Manager On-Call Monitoring Personnel Method 21 Assessor Audit Expertise	1 3 1 1 7	100 100 100 100 100 5 10 10 10
	Supervisor Inspection and Inventory Technician Project Technician Data Manager On-Call Monitoring Personnel Method 21 Assessor	1 3 1 1 7 1 3	100 100 100 100 5 10

53.b	An identification and description of any nor	compliance with the requirements of Section V (Compliance R	equirements);
	Covered Process Unit	Requirement identification (citation & requirement summary)	Description of Non Compliance condition and associated corrective action
	Low Gloss ABS Unit	Consent Decree No. 1:11-cv-13330-TLL-CEB	Description of Non-Compliance:
	Low Gloss Abs Office	V.C.15.a.	Third quarter fugitive monitoring was missed for one valve subject to the fugitive monitoring program. The valve had been removed from the LDAR program due to a miscommunication. This was previously reported in the Mar 2014 Title V submittal for Styron, LLC.
			Corrective Action: Immediately upon discovery, the monitoring technician add the valve back to the LDAR program and monitored the valve via Method 21. No leak was identified, therefore no excess emissions resulted. In addition, Dow has updated the fugitive management of change work process for removal of LDAR components to ensure components are not removed from fugitive monitoring routes by the fugitive contractor prior to obtaining facility approval and updating the LDAR database.

Covered Process Unit	Requirement Identification (citation & requirement summary)	Description of Non Compliance condition and associated corrective action
Low Gloss ABS Unit and Ethocel ™ cellulose ethers	Consent Decree No. 1:11-cv-13330-TLL-CEB V.A.13	Description of Non-Compliance: For equipment subject to the fugitive leak requirements of various MACT standards, changes in fugitive equipment leak method of compliance (e.g., from single mechanical seal to dual mechanical seal) and monitoring frequency (e.g., from quarterly to semi-annual) were not being specifically reporter in the periodic report. This deviation was discovered during a audit in a different process unit, but was corrected sitewide. This was previously reported in the March 2014 Title V submittal for Michigan Operations and Styron, LLC. Corrective Action: Instructions on how to complete the periodic report were updated to include additional information on this requirement. A work process document was implemented to identify when equipment monitoring frequency has changed based on information in the fugitive database. Changes were noted in the periodic report and an updated NOCS will be prepared and submitted in the next periodic report.
Low Gloss ABS Unit	Consent Decree No. 1:11-cv-13330-TLL-CEB V.G.32.b.	Description of Non-Compliance: Two occurrences of replacing valves later than the date specified in paragraph V.G.32.b. See VI.53.b Attachment 1 for details. Corrective Action: Valve improvement program guidance documents were created and training was enhanced. Additional valve improvement tracking methods are being evaluated.

	Covered Process Unit	Requirement Identification (citation & requirement summary)	Description of Non Compliance condition and associated corrective action
Ī	Ethocel ™ cellulose ethers	Consent Decree No. 1:11-cv-13330-TLL-CEB V.A.13.	Description of Non-Compliance: The unload compressor at Ethocel is designated as no detectable emissions (NDE). The monitoring requirement is annual and any reading over 500 ppmv is considered a reportable leak. On 7/9/2013 a leak was found at > 500 ppmv. This deviation was previously reported in the March 2014 Title V submittal for Michigan Operations. Corrective Action: Immediate corrective action was taken to repair and remonitor the unload compressor. The repair was validated per Method 21 to demonstrate that emissions were less than 500 parts per million by volume above background. In addition, the compressor has been fitted with a nitrogen purge that will convey any fugitive emissions through a close vent system to a control device.
	Ethocel ™ cellulose ethers	Consent Decree No. 1:11-cv-13330-TLL-CEB V.A.13.	Description of Non-Compliance: Dual mechanical seal pumps and dual mechanical seal agitators subject to equipment leak provisions under various MACT rules did not have documentation of the design criteria and an explanation for the design criteria. This deviation was discovered during an audit in a different process unit, but wa corrected sitewide. This deviation was previously reported in the March 2014 Title V submittal for Michigan Operations. Corrective Action: The required documentation has been created and training was provided.

Covered Process Unit	Compliance Status R Requirement Identification (citation & requirement summary)	Description of Non Compliance condition and associated corrective action
Ethocel ™ cellulose ethers	Consent Decree No. 1:11-cv-13330-TLL-CEB V.C.15	Description of Non-Compliance: Five connectors and one OELCD associated with the rail car unloading flex hose line were discovered to be missing from the fugitive emissions monitoring program. This deviation wa discovered during an audit in a different process unit, but was corrected sitewide. This deviation was previously reported in the March 2014 Title V submittal for Michigan Operations. Corrective Action: Immediately upon discovery, applicable equipment was added to the LDAR program and monitored via Method 21. There were no leaks.

Covered Process Unit	Requirement Identification (citation & requirement summary)	Description of Non Compliance condition and associated corrective action
Ethocel ™ cellulose ethers	Consent Decree No. 1:11-cv-13330-TLL-CEB V.A.13.	Description of Non-Compliance: Sixteen sampling connection systems in > 5% HAP service were not uniquely identified as LDAR applicable equipment. However, the connectors and valves associated with the sampling connection systems are uniquely identified and are included in the LDAR program. This deviation was discovered during an audit in a different process unit, but was corrected sitewide. Corrective Action: Created list that contains all LDAR applicable sampling connection systems.
Ethocel ™ cellulose ethers	Consent Decree No. 1:11-cv-13330-TLL-CEB V.D.22	Description of Non-Compliance: A MACT pump was discovered to be leaking on 5/16/14 (Friday) and was repaired on the same day. However, repair verification monitoring was not conducted within 24 hours. Corrective Action: Repair verification monitoring was conducted on 5/20/14 at the pump was confirmed to be leak free. Additional training has been conducted with operations personnel to ensure 24 hour repair verification monitoring gets performed as required. Additional prompts to flag repairs on ELP equipmed leaks are being evaluated.

	ELP C	ompliance Status Report			
VI.53.c	An identification of any problems encountered in complying with the requirements of Section V (Compliance Requirements);				
	Requirement Identification (citation & requirement summary)	Description of problem and associated corrective action			
	None	None			
VI:53.d	The information required by Paragraph 40 of Subsection V.G (Valve and Connector Replacement and Improvement Program)	See Appendix V.G: Valve and Connector Replacement and Improvement Program Report			
VI.53.e	A description of the trainings done in accordance	with this Consent Decree			
	Training Identification	Summary of Training			
	Fugitive ELP Training - General Overview	General requirements for personnel with limited interaction with the program. Pertains to individuals such as engineering staff who order equipment, document administrators, and other office personnel.			
	Enhanced LDAR Program (ELP) Training - Maintenance staff	Review of requirements pertaining to repair and maintenance of LDAR equipment. Includes personnel such as those that complete repairs, install equipment, install packing, and perform other maintenance activities.			
	Enhanced LDAR Program (ELP) Training - Operations Staff	Review of requirements pertaining to day-to-day management of the ELP requirements. Includes personnel with day-to-day field activities. They may perform repair attempts, visual inspections, and minor maintenance of LDAR equipment.			
	Enhanced LDAR Program (ELP) Training - Tech Staff	In-depth review of all facility specific ELP requirements. Training is given to roles including project engineers, improvement engineers, process engineers, plant leadership, facility LDAR program contacts, monitoring personnel, and program managers.			

	ELPO	Compliance Status Report
VI.53.f	Any deviations identified in the QA/QC perform	med under Subsection V.J as well as any corrective actions taken under that Subsection
	QA/QC Deviation Description	Summary of Corrective Action
	None	Not applicable
VI.53.g	A summary of LDAR audit results including spe	cifically identifying all alleged deficiencies
V.L.J.S	Description of LDAR Audit Area	Summary of Results, Deficiencies, & Resolution Actions
	Ethocel ™ cellulose ethers	Description of Non-Compliance: During observations of technician monitoring techniques, the audit team observed that one technician did not monitor the pump casing drain plug located on the pump casing. The pump casing drain plug was difficult to spot and not all pumps have casing drain plugs.
		Corrective Action: The fugitive monitoring contractor employees have been re-trained to ensure they understand the requirements for monitoring all potential pump leak interfaces as required by 40 CFR 60 Appendix A - Method 21. In addition, the fugitive monitoring contractor has updated their Method 21 training document.
	Ethocel ™ cellulose ethers	Description of Non-Compliance: During observations of technician monitoring techniques, the audit team observed that two technicians did not monitor the entire potential leak interfaces on one sample valve. This valve is not a typical valve with a stem, so the technicians failed to recognize to monitor the bolt on the backside of the valve.
		Corrective Action: The fugitive monitoring contractor employees have been re-trained to ensure the understand the requirements for monitoring all potential valve leak interfaces as required by 40 CFR 60 Appendix A - Method 21. In addition, the fugitive monitoring contractor has updated their Method 21 training document.
	Ethocel ™ cellulose ethers	Description of Non-Compliance: Two connectors were not replaced or improved within the required timeframe after leaking above 250 ppm in two consecutive monitoring periods. See VI.53.b Attachment 1 for details. Corrective Action: See VI.53.b Attachment 1 for replacement details. In addition, connector replacement or improvement program
		guidance documents were created and training was conducted.
	Low Gloss ABS Unit	Auditors believed that two connectors (18412.1 and 108603.2) were not replaced or improved within the required timeframe after leaking above 250 ppm in two consecutive monitoring periods. Upon further review, Dow has determined that the audit finding was incorrect. Both connectors required a process unit shutdown to complete the required replacements, and both connectors were replaced during the first Maintenance Shutdown following the initiatriggering events.

ELP Compliance Status Report

VI.53.h

The status of all actions under any Corrective Action Plan (CAP) that was submitted during the reporting period, unless the CAP was submitted less than one month before the compliance status report

The CAP is not yet due. The 2014 LDAR Audit Completion Date was 5/1/2014 (based on the requirement in Paragraph 45 of the Consent Decree to occur no later than the end of the 2nd quarter, when the first LDAR Audit Completion Date occurred), therefore, according to the submittal time frame set forth in Subsection K, Paragraph 50.b. the Corrective Action Plan shall be submitted no later than the date that is four months after the LDAR Audit Completion Date (9/1/2014). All corrective actions are expected to be complete before the CAP due date.

VI.53.b - Attachment 1 V.G. 32.b Non-Conformances

alve tag number	Date of monitoring event that triggered V.G.32 requirements	Date of Repair Verification and Method 21 Screening Value	Date of V.G.32 requirement completion	Number of days out of compliance with V.G.32.b.	Low E Technology Commercially Available
		8/19/13 63 ppm	11/13/2013	> 40	No
		5/15/2014	7/2/2014	18	Yes
The same of the sa	alve tag number 16916 15923	event that triggered V.G.32 requirements 16916 8/15/2013	Date of monitoring event that triggered value alve tag number V.G.32 requirements Value 8/19/13 63 ppm 5/15/2014	Verification Date of monitoring event that triggered Value Completion	Date of monitoring event that triggered v.G.32 requirements Value completion 16916 Date of monitoring event that triggered v.G.32 requirements value completion 8/19/13 63 ppm 11/13/2013 5/15/2014 A ppm 7/2/2014 18

V.G. 38.a Non-Conformances

Covered Process Unit	Connector tag	Date of monitoring event that triggered V.G.38 requirements	Date of Repair Verification and Method 21 Screening Value	Date of V.G.38 requirement completion	Number of days out of compliance with V.G.38.b.	V.G. 36.a Connector Replacement or Improvement Type
Ethocel ™ cellulose ethers	100557	3/8/2013	3/12/2013 141 ppm	5/8/2014	> 80	Replaced flanged connector gasket
	100337	-,-,-	3/5/2013			Replaced with like kind threaded
Ethocel ™ cellulose ethers	62146.2	3/4/2013	2 ppm	3/13/2014	> 80	connector

Appei	naix v.6: vaiv	ve and Conn	ector Replacen	icaic and impi		
/.G.28	Commencing no later than s	six months after the Effecti lement the program set for hat are Covered Equipmen	ve Date of this Consent Decree, a th in Paragraphs 29-40 to improv t in each Covered Process Unit. A	ind continuing until ve the emissions performance		November 23, 2011
.G.29	List of all Existing Valves in 1	the covered Process Unit: I	n the first compliance status rep hall include a list of the tag numl e. The valves on the list shall be	Jetz Of all Agines anniect to the	E LLF , DIONCII GOVVII D , COTO	Not applicable
,G.30	with respect to each new vi	alve that is subject to LDAR	that is installed (whether the ne	w vaive replaces an existing v	alve of minewiy added to one	undertake the following work practices Covered Process Unit) and each Existing
/.G.30.a	gland nut or packing torque	: (i) the manufacturer's recommended actice shall be implemented prior to the				
		inan on the valve backing and, it liecess				
/.G.30.b	Not less than three days no shall tighten the packing glaminimize the potential for	and nuts or their equivalen	t (e.g., pushers) to: (i) the manu	facturer's recommended glan	a nat or pound so question	
Data V.G.30	shall tighten the packing glaminimize the potential for	and nuts or their equivalen	t (e.g., pushers) to: (i) the manu ny magnitude.	lnstallation Date	d nut or packing torque; or (ii)	
Oata V.G.30	shall tighten the packing glaminimize the potential for	and nuts or their equivalen fugitive emission leaks of a Valve Description and/or Tag #	t (e.g., pushers) to: (i) the manu- ny magnitude. New Valve or Repacked/Replaced Existing	lacturer s recommended gian	a nat or pound so question	
Oata V.G.30	shall tighten the packing gl- minimize the potential for Covered Process Unit	and nuts or their equivalent fugitive emission leaks of all Valve Description and/or Tag # 77850 DO-416A/ TRUCK SPOT	t (e.g., pushers) to: (i) the manu- ny magnitude. New Valve or Repacked/Replaced Existing Valve	Installation Date	In Service Date	Date of Valve Packing Load Re-Chec
Oata V.G.30	shall tighten the packing glaminimize the potential for a Covered Process Unit Ethocel ™ cellulose ethers	and nuts or their equivalent fugitive emission leaks of all Valve Description and/or Tag # 77850 DO-416A/ TRUCK SPOT VENT VALVE	t (e.g., pushers) to: (i) the manu- ny magnitude. New Valve or Repacked/Replaced Existing Valve Repacked/Replaced	Installation Date 7/15/2013	In Service Date 7/15/2013	Date of Valve Packing Load Re-Cher 7/24/2013
Data V.G.30	shall tighten the packing glaminimize the potential for a covered Process Unit Ethocel ™ cellulose ethers Ethocel ™ cellulose ethers	and nuts or their equivalent fugitive emission leaks of all Valve Description and/or Tag # 77850 DO-416A/TRUCK SPOT VENT VALVE 101411	t (e.g., pushers) to: (i) the manu- ny magnitude. New Valve or Repacked/Replaced Existing Valve Repacked/Replaced Repacked/Replaced	Installation Date	7/15/2013	7/24/2013
V.G.30.b Data V.G.30 a-b	shall tighten the packing global minimize the potential for a covered Process Unit Ethocel ™ cellulose ethers Ethocel ™ cellulose ethers Ethocel ™ cellulose ethers	and nuts or their equivalent fugitive emission leaks of all Valve Description and/or Tag # 77850 DO-416A/ TRUCK SPOT VENT VALVE 101411 107130	Repacked/Replaced Repacked/Replaced Repacked/Replaced Repacked/Replaced Repacked/Replaced Repacked/Replaced	7/15/2013 7/15/2013	7/15/2013 7/15/2013	7/24/2013 7/24/2013
Data V.G.30	shall tighten the packing glaminimize the potential for a covered Process Unit Ethocel ™ cellulose ethers Ethocel ™ cellulose ethers Ethocel ™ cellulose ethers Ethocel ™ cellulose ethers	and nuts or their equivalent fugitive emission leaks of all Valve Description and/or Tag # 77850 DO-416A/ TRUCK SPOT VENT VALVE 101411 107130 100736	Repacked/Replaced Repacked/Replaced Repacked/Replaced Repacked/Replaced Repacked/Replaced Repacked/Replaced	7/15/2013 7/15/2013 10/21/2013	7/15/2013 7/15/2013 11/9/2013	Date of Valve Packing Load Re-Chec 7/24/2013 7/24/2013 11/12/2013

		D. Just/Deplesed	10/30/2013	11/9/2013	11/12/2013
thocel ™ cellulose ethers	101525	Repacked/Replaced	10/30/2013		
thocel ™ cellulose ethers	101354	Repacked/Replaced	11/24/2013	11/24/2013	11/27/2013
thocei ···· cellulose etileis	101334				
thocel ™ cellulose ethers	100402	Repacked/Replaced	3/1/2014	3/1/2014	3/5/2014
thocel ™ cellulose ethers	Reactor 2 Strahman Valve	Repacked/Replaced	4/4/2014	4/4/2014	4/7/2014
thocel ™ cellulose ethers		Repacked/Replaced	4/24/2014	5/13/2014	5/19/2014
		Repacked/Replaced	4/24/2014	5/13/2014	5/19/2014
thocel ™ cellulose ethers		Repacked/Replaced	4/25/2014	5/13/2014	5/19/2014
Ethocel ™ cellulose ethers			4/25/2014	5/13/2014	5/19/2014
Ethocel ™ cellulose ethers	101541	Repacked/Replaced	4/25/2021		5/19/2014
Ethocel ™ cellulose ethers	85458	Repacked/Replaced	4/25/2014	5/13/2014	3/13/2014
Ethocel ™ cellulose ethers	100777	Repacked/Replaced	4/26/2014	5/13/2014	5/19/2014
Ethocel ™ cellulose ethers		Repacked/Replaced	4/29/2014	5/13/2014	5/19/2014
Ethocel ™ cellulose ethers		Repacked/Replaced	5/2/2014	5/13/2014	5/19/2014
Ethocel ™ cellulose ethers		Repacked/Replaced	5/5/2014	5/13/2014	5/19/2014
		Repacked/Replaced	5/5/2014	5/13/2014	5/19/2014
Ethocel ™ cellulose ethers		Repacked/Replaced	5/5/2014	5/13/2014	5/19/2014
Ethocel ™ cellulose ethers	106347	Repacked/Replaced	5/5/2014	5/13/2014	5/19/2014

thocel ™ cellulose ethers	106366	Repacked/Replaced	5/5/2014	5/13/2014	5/19/2014
	106392	Repacked/Replaced	5/5/2014	5/13/2014	5/19/2014
thocel ™ cellulose ethers		Repacked/Replaced	5/5/2014	5/13/2014	5/19/2014
thocel ™ cellulose ethers		Repacked/Replaced	5/5/2014	5/13/2014	5/19/2014
thocel ™ cellulose ethers		Repacked/Replaced	5/5/2014	5/13/2014	5/19/2014
thocel ™ cellulose ethers		Repacked/Replaced	5/6/2014	5/13/2014	5/19/2014
Ethocel ™ cellulose ethers		Repacked/Replaced	5/6/2014	5/13/2014	5/19/2014
Ethocel ™ cellulose ethers		Repacked/Replaced	5/6/2014	5/13/2014	5/19/2014
Ethocel ™ cellulose ethers		Repacked/Replaced	5/7/2014	5/13/2014	5/19/2014
Ethocel ™ cellulose ethers		Repacked/Replaced	5/7/2014	5/13/2014	5/19/2014
Ethocel ™ cellulose ethers		Repacked/Replaced	5/7/2014	5/13/2014	5/19/2014
Ethocel ™ cellulose ethers		Repacked/Replaced	5/7/2014	5/13/2014	5/19/2014
Ethocel ™ cellulose ethers		Repacked/Replaced	5/7/2014	5/13/2014	5/19/2014
Ethocel ™ cellulose ethers		Repacked/Replaced	5/7/2014	5/13/2014	5/19/2014
Ethocel ™ cellulose ethers		Repacked/Replaced	5/7/2014	5/13/2014	5/19/2014
Ethocel ™ cellulose ethers		Repacked/Replaced	5/7/2014	5/13/2014	5/19/2014

	Ethocel ™ cellulose ethers			5/16/2014	nprovement Pro	5/20/2014
	Ethocel ™ cellulose ethers		Repacked/Replaced	6/24/2014	6/24/2014	6/30/2014
	Ethocel ™ cellulose ethers	-	Repacked/Replaced	6/25/2014	6/25/2014	6/30/2014
					6/26/2014	6/30/2014
	Ethocel ™ cellulose ethers	DO 429A truck vent valve	Repacked/Replaced	6/26/2014	6/26/2014	that serves as the closure device on littled with Low-E Packing. This
and the second second second		teram ak ito 1980 A Nestin till belek Milahabasa attilla	ne next ELP compliance status	eport.	acement of a valve where a Low-EV	
G.31b		teram ak ito 1980 A Nestin till belek Milahabasa attilla	ed temporarily for a short term Low E Technology Installed	purpose and then remov	ed (e.g., valves connecting a portion not used, explain (if "commercially	of the Covered Process Unit to a test
G.31b	Paragraph 31 shall not app device.)	ly to valves that are install	ed temporarily for a short term	purpose and then remov	ed (e.g., valves connecting a portion	
G.31b	Paragraph 31 shall not app device.)	ly to valves that are installed	ed temporarily for a short term Low E Technology Installed	purpose and then remov If Low E Technology unavailable", see Ap	ed (e.g., valves connecting a portion not used, explain (if "commercially opendix V.G. 34 and Commercial	
G.31b	Paragraph 31 shall not app device.) Covered Process Unit Ethocel ™ cellulose ethers	Valve Tag # or Description DO-416A/ TRUCK SPOT VENT VALVE	Low E Technology Installed (Yes or No)	purpose and then remov If Low E Technology unavailable", see Ap Unavailability)	ed (e.g., valves connecting a portion not used, explain (if "commercially opendix V.G. 34 and Commercial	
.G.31b	Paragraph 31 shall not app device.) Covered Process Unit Ethocel ™ cellulose ethers Ethocel ™ cellulose ethers	Valve Tag # or Description DO-416A/ TRUCK SPOT VENT VALVE 101354 Reactor 2 Strahman	Low E Technology Installed (Yes or No)	purpose and then remov If Low E Technology unavailable", see Ap Unavailability) See Ethocel Append	ed (e.g., valves connecting a portion not used, explain (if "commercially opendix V.G. 34 and Commercial lix V.G.34	
/,G.31b	Paragraph 31 shall not app device.) Covered Process Unit Ethocel ™ cellulose ethers	Valve Tag # or Description DO-416A/ TRUCK SPOT VENT VALVE 101354 Reactor 2 Strahman Valve	Low E Technology Installed (Yes or No) No	purpose and then remov If Low E Technology unavailable", see Ap Unavailability) See Ethocel Append	ed (e.g., valves connecting a portion not used, explain (if "commercially opendix V.G. 34 and Commercial lix V.G.34	

thocel ™ cellulose ethers	106347	No	See Ethocel Appendix V.G.34	
Hotel cellalose esters				
hocel ™ cellulose ethers	106395	No	See Ethocel Appendix V.G.34	
hocel ™ cellulose ethers	106366	No	See Ethocel Appendix V.G.34	
			See Ethocel Appendix V.G.34	
hocel ™ cellulose ethers	106392	No	See Ediocel Appendix Proiss.	
thocel ™ cellulose ethers	106368	No	See Ethocel Appendix V.G.34	
CHOCEL CONGRET CONGRET				
Ethocel ™ cellulose ethers	106346	No	See Ethocel Appendix V.G.34	
			See Ethocel Appendix V.G.34	
Ethocel ™ cellulose ethers	106371	No	See Etriotei Appendix V.3.34	
Ethocel ™ cellulose ethers	100402	No	See Ethocel Appendix V.G.34	
Ethocel cendidae ethera	250102			
Ethocel ™ cellulose ethers	100952	No	See Ethocel Appendix V.G.34	
			- Fil 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Ethocel ™ cellulose ethers	100401	No	See Ethocel Appendix V.G.34	
Ethocel ™ cellulose ethers	100402	No	See Ethocel Appendix V.G.34	
Ethocei Cendiose ethers	100-02			
Ethocel ™ cellulose ethers	100377	No	See Ethocel Appendix V.G.34	
Ethocel ™ cellulose ethers	100347	No	See Ethocel Appendix V.G.34	
Ethocel™ cellulose ethers	108966	No	See Ethocel Appendix V.G.34	
Ethocei cenulose ethers	100700			
Ethocel ™ cellulose ethers	100327	No	See Ethocel Appendix V.G.34	
Ethocel ™ cellulose ethers	100309	No	See Ethocel Appendix V.G.34	

	Ethocel ™ cellulose ethers	08308	No	See Ethocel Appendix V.G.34	
	Ethocel ™ cellulose ethers			Low E Velan 2" ball valve was installed on 5/15/2014 and 6/26/2014. Valve leaked by internally to the process during both installations. See Ethocel Appendix V.G.34	
			No	Non-Low E Jamesbury 2" ball valve installed on 5/16/2014 and 6/26/2014 after both Velan valves failed. See Ethocel Appendix V.G.34	
A STATE OF THE STA	- Transparenting Evi	cting Valves that Have Scre	ening Values at or ab-	ove 250 ppm with Low E Valves or Low E Packing.	
.G.32.a	a. Existing Valves Required	to Be Replaced or Repack	ed. Except as provide	d in Paragraph 34, for each Existing Valve that has a Screening Value at or above 230 ppin of	
.G.32.b	b. Timing: If Replacing or I	Repacking Does Not Requir month after the monitoring	e a Process Unit Shuto g event that triggers	town. If replacing or repacking does not require a process unit stateown, body state re- the replacing or repacking requirement, unless Dow complies with the following:	
					as practical, and recon
haran dara (606)	documentation of the acti	ons taken and the date of	each such action,	quired valve or valve packing, including all necessary associated materials, as expeditiously a	o complete the
haran dara (606)	If, despite Dow's efforts to installation within one mo (a) Repair; (b) More frequ packing that is not Low-E	ons taken and the date of a comply with Subparagrap inth, Dow must take all rea ent monitoring, with addit Packing; and	h 32.b.i, the required sonable actions to mi onal repairs as neede	valve or valve packing, including all necessary associated materials, is not available in time to nimize emissions from the valve pending completion of the required replacing or repacking, d; or (c) Where practical, interim replacing or repacking of a valve with a valve that is not a L	o complete the Examples include:
.G.32.b.ii /.G.32.b.ii	If, despite Dow's efforts to installation within one mo (a) Repair; (b) More freque packing that is not Low-E	ons taken and the date of a comply with Subparagrap onth, Dow must take all rea ent monitoring, with addit Packing; and	h 32.b.i, the required sonable actions to mil onal repairs as neede	valve or valve packing, including all necessary associated materials, is not available in time to import the valve pending completion of the required replacing or repacking, d; or (c) Where practical, interim replacing or repacking of a valve with a valve that is not a Left or (c) where practical, interim replacing or repacking of a valve with a valve that is not a Left or (c) where practical, interim replacing or repacking of a valve with a valve that is not a Left or (c) where practical is not a Left or (c) where practical is not a left or (c) where practical is not available in time to consider the valve or valve packing, including all necessary associated materials.	o complete the Examples include: Low-E Valve or with
.G.32.b.ii .G.32.b.iii	If, despite Dow's efforts to installation within one mo (a) Repair; (b) More frequing packing that is not Low-E. Dow must promptly perform of the company o	ons taken and the date of a comply with Subparagrap onth, Dow must take all real ent monitoring, with additional packing; and form the required replacing Repacking Requires a Procum that follows the monitoring and the reduced replacing with the reduced replacing with the reduced replacing replac	h 32.b.i, the required sonable actions to min onal repairs as neede or repacking after Dovess Unit Shutdown. If oring event that trigge	valve or valve packing, including all necessary associated materials, is not available in time to nimize emissions from the valve pending completion of the required replacing or repacking, d; or (c) Where practical, interim replacing or repacking of a valve with a valve that is not a L	o complete the Examples include: Low-E Valve or with xisting Valve during the
.G.32.b.ii /.G.32.b.iii /.G.32.c	documentation of the acti If, despite Dow's efforts to installation within one mo (a) Repair; (b) More frequ packing that is not Low-E. Dow must promptly perfo c. Timing: If Replacing or first Maintenance Shutdo the monitoring event and replacing or repacking at	ons taken and the date of a comply with Subparagrap onth, Dow must take all reasent monitoring, with additional packing; and compared replacing Repacking Requires a Procum that follows the monitor that Maintenance Shutler Replacing or Repacking	h 32.b.i, the required sonable actions to mil onal repairs as neede or repacking after Downsess Unit Shutdown. If oring event that trigge with the enable Down to put own that occurs after Pursuant to Subparage	valve or valve packing, including all necessary associated materials, is not available in time to nimize emissions from the valve pending completion of the required replacing or repacking, d; or (c) Where practical, interim replacing or repacking of a valve with a valve that is not a Lew's receipt of the valve or valve packing, including all necessary associated materials. The requirement to replace or repack the valve, unless Dow documents that insufficient to purchase and install the required valve or valve packing technology. In that case, Dow shall the receipt of the valve or valve packing, including all necessary associated materials. The repacking receipt of the valve or valve packing, including all necessary associated materials.	o complete the Examples include: Low-E Valve or with xisting Valve during the lime existed between undertake the
(.G.32.b.ii	if, despite Dow's efforts to installation within one mo (a) Repair; (b) More frequipacking that is not Low-E. Dow must promptly perform the monitoring event and replacing or repacking at the replacing or repacking the replacing or repacking the leak detection, Dow's efforts the state of the monitoring event and replacing or repacking at the replacing or repacking the leak detection, Dow's efforts to the state of the	ons taken and the date of a comply with Subparagrap onth, Dow must take all reasent monitoring, with additional packing; and form the required replacing Repacking Requires a Procum that follows the monitoring that Maintenance Shutdothe next Maintenance Shutdothe next Maintenance Shutdothe Subsection E. Dow so by the date that is no later easonably can anticipate to	h 32.b.i, the required sonable actions to mile on a repairs as neede or repacking after Dovess Unit Shutdown. If oring event that trigge what o enable Dow to part of the required the rethan one month after that it might not be ab	valve or valve packing, including all necessary associated materials, is not available in time to implicate emissions from the valve pending completion of the required replacing or repacking, d; or (c) Where practical, interim replacing or repacking of a valve with a valve that is not a Lew's receipt of the valve or valve packing, including all necessary associated materials. The requirement to replace or repack the valve, unless Dow documents that insufficient to burchase and install the required valve or valve packing technology. In that case, Dow shall are Dow's receipt of the valve or valve packing, including all necessary associated materials.	e complete the Examples include: Low-E Valve or with Existing Valve during the existed between undertake the - c if Dow completes the cable requirements o

V.G.32 C	Covered Process Unit	Valve Tag#	Screening Value (ppm) and Initial Monitoring Date		Why	Schedule for Known Replacement, Repackings, Improvements, or Eliminations
E	Ethocel ™ cellulose ethers	77850	321 6/17/2013	7/15/2013 Replaced valve.	Not Applicable	Not Applicable
Ē	Ethocel ™ cellulose ethers	84912	262 6/18/2013		Replace/Repack did not occur during the first Maintenance Shutdown following the initial leak date due to valve/valve packing and associated materials not available. Upon ordering equipment, manufacturer documented 10 week lead time for receipt of equipment.	Not Applicable
	Ethocel ™ cellulose ethers	100227	1715 6/18/2013	Maintenance Shutdown Required: Replaced on 10/30/2013 during the first Maintenance Shutdown after the initial monitoring event.	Not Applicable	Not Applicable
	Ethocel ™ cellulose ethers	5 107130	481 6/18/2013	Maintenance Shutdown Required: Replaced on 10/21/2013 during the first Maintenance Shutdown after the monitoring event.	Not Applicable	Not Applicable
	Ethocel ™ cellulose ether	s 101411	886 6/19/2013	7/15/2013 Replaced valve.	Not Applicable	Not Applicable

IGIN 4.G. JUIV		DA F	Acement and Improvement and Improvement	Replace/Repack did not	Not Applicable
Ethocel ™ cellulose ethers	101551	[312	Required: Replaced on	occur during the first	
		6/19/2013	4/24/2014 due to insufficient	Maintenance Shutdown	
1		•		following the initial leak	
		E	time between the	date due to valve/valve	
:			C+C++++++++++++++++++++++++++++++++++	packing and associated	
			[14) Distriction	packing and associated	
			October 2022	materials not available.	ļ
		İ		Upon ordering equipment,	
•		ļ	(and 2) 1, 2 1, 1, 2	manufacturer documented	
			I (O HO) parade superior - I	6 week lead time for	<u>t</u>
		ł ·	penalties for this situation.	receipt of equipment.	
			(
		215	Maintenance Shutdown	Not Applicable	Not Applicable
Ethocel ™ cellulose ethers	100736	315	Required: Valve repacked.		
		6/20/2013	Valve installed in plant on		
			10/23/2013 during the first		
			Maintenance Shutdown after		1
			the monitoring event.		
			the monnoring stars.		
	•			Not Applicable	Not Applicable
Ethocel ™ cellulose ethers	106229	721	Maintenance Shutdown	Mor Wholicapie	1
Ethotel Cellalose ethers	200227	6/20/2013	Required: Replaced on	1	
		1	10/23/2013 during the first		<u>.</u>
		Į.	Maintenance Shutdown after		
			the monitoring event.		
		200	Maintenance Shutdown	Not Applicable	Not Applicable
Ethocel ™ cellulose ethers	101525	389	Required: Replaced on		1
		9/9/2013	10/30/2013 during the first		
4			Maintenance Shutdown after		1
			the monitoring event.		!
			1		
		744	Maintenance Shutdown	Not Applicable	Not Applicable
Ethocel ™ cellulose ethers	77855	744	Required: Valve was removed	ı İ	
		9/11/2013	from service on 10/20/2013		
		ļ.	during the first Maintenance		
A20 A33			Shutdown after the		
	1		monitoring event.		Ì
용하					

Ethocel ™ cellulose ethers

Appendix V.G: Valve and Connector Replacement and Improvement Program Report Maintenance Shutdown Ethocel ™ cellulose ethers | 101541 Required: Replaced on 12/4/2013 10/30/2013 during the first Maintenance Shutdown after the monitoring event. Not Applicable Not Applicable Maintenance Shutdown 277 Ethocel ™ cellulose ethers 100777 Required: Replaced on 12/6/2013 4/26/2014 during the first Maintenance Shutdown after the monitoring event. Not Applicable Not Applicable Maintenance Shutdown Ethocel ™ cellulose ethers 100853 Required: Replaced on 12/6/2013 5/2/2014 during the first Maintenance Shutdown after the monitoring event. Not Applicable Not Applicable Maintenance Shutdown 751 Ethocel ™ cellulose ethers 100898 Required: Replaced on 12/6/2013 4/29/2014 during the first Maintenance Shutdown after the monitoring event. Not Applicable Not Applicable Maintenance Shutdown Ethocel ™ cellulose ethers 108422 958 Required: Valve repacked. 12/10/2013 Valve installed in plant on 5/6/2014 during the first Maintenance Shutdown after the monitoring event. Not Applicable Not Applicable Maintenance Shutdown 512 Ethocel ™ cellulose ethers 100577 Required: Valve repacked. 3/5/2014 Valve installed in plant on 5/6/2014 during the first 1526 Maintenance Shutdown after

the monitoring event.

3/12/2014

Appelluix v.g. valve and com-	Maintenance Shutdown	Not Applicable	Not Applicable
Ethocel ™ cellulose ethers Appendix V.G: Valve and Connector Replace	ement and Impro	vement Prog	ram Report

hhei	Ethocel ™ cellulose ethers	100826	704 3/5/2014	Required: Valve repacked. Valve installed in plant on	Not Applicable	Not Applicable
				5/6/2014 during the first Maintenance Shutdown after the monitoring event.		
	Ethocel ™ cellulose ethers	85458	1258 3/11/2014	Maintenance Shutdown Required: Replaced on 4/25/2014 during the first Maintenance Shutdown after the monitoring event.	Not Applicable	Not Applicable
	Ethocel ™ cellulose ethers	100353	1010 6/4/2014	6/24/20145 Valve replaced.	Not Applicable	Not Applicable
	Ethocel ™ cellulose ethers	100930	3846 6/5/2014	6/24/2014 Valve replaced.	Not Applicable	Not Applicable
	Ethocel ™ cellulose ethers	97365	5525 6/9/2014	Replace/Repack scheduled to occur outside of the current reporting period (7/1/2013-6/30/2014).	Replace/Repack requires Maintenance Shutdown	Replace/Repack will occur by the end of the first Maintenance Shutdown after the monitoring event, currently scheduled for: October 2014.
.G:33	33. Provisions Related to L	ow-E Valves and Low-	E Packing.			
		11. S. June 11. 15. 15. 15. 15. 15. 15. 15. 15. 15.	asks If during monitoring after	er installation, a Low-E Valve or a valve u	sing Low-E Packing has a Scr	eening Value at or above 250 ppm, the
/.G.33.a	leak is not a violation of th	is Decree, does not it	Maildate the FOM C States of			
.G.33.b	27 shall apply.					250 ppm, Paragraphs 21, 22, 24, 25, 26 an
/,G,33,c	c. Replacing or Repacking shall not be required to re repack it pursuant to the	place or repack it. U	J any occasion when a row r .	or a valve that utilizes Low-E Packing has alve or a valve that utilizes Low E Packing	a Screening Value at or abo has a Screening Value at or	above 500 ppm, Dow shall replace or

ndix V.G.34
ndix V.G.35
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Control of the contro
visions of
re technically feasible uality, regulatory or
er LDAR, to select a requirement applies
er LD reqi

Covered Process Unit		Connector Type	Connector Selected That Is Least Likely To Leak (Yes or No)	if Ethocel piping specifications were no followed to select connector, explain wh
Ethocel ™ cellulose e	thers 109884.3	Flanged - Gasket	Yes	Not Applicable
<u>_</u>		Flanged - Gasket	Yes	Not Applicable
Ethocel ™ cellulose €	thers 109884.4	Hanged - Gasket		Not Applicable
Ethocel ™ cellulose o	ethers 109884.5	Threaded	Yes	
Ethocel ™ cellulose	ethers 109884.6	Threaded	Yes	Not Applicable
2 2		Threaded	Yes	Not Applicable
Ethocel ™ cellulose	ethers 109884.7		Yes	Not Applicable
Ethocel ™ cellulose	ethers 109366.1	Threaded		Not Applicable
Ethocel ™ cellulose	ethers 109366.2	Threaded	Yes	Not Applicable
Ethocel ™ cellulose	ethers 109366.3	Threaded	Yes	Not Applicable
29 28		Threaded	Yes	Not Applicable
Ethocel ™ cellulose	ethers 109366.4		Vos	Not Applicable
Ethocel ™ cellulose	ethers 109366.5	Threaded	Yes	
Ethocel ™ cellulose	ethers 106377.4	Threaded	Yes	Not Applicable
Ethocel ™ cellulose		Flanged - Gasket	Yes	Not Applicable
		Flanged - Gasket	Yes	Not Applicable
Ethocel ™ cellulose	ethers 150058.2	Flangeu - Gasket		Not Applicable
Ethocel ™ cellulos	e ethers 150059.1	Flanged - Gasket	Yes	
Ethocel ™ cellulos	e ethers 150059.2	Flanged - Gasket	Yes	Not Applicable
		Flanged - Gasket	Yes	Not Applicable
Ethocel ™ cellulos			Yes	Not Applicable
Ethocel ™ cellulos	e ethers 150063.2	Flanged - Gasket	163	later Applicable
Ethocel ™ cellulos	e ethers 100025	Flanged - Gasket	Yes	Not Applicable

ix V.G: Valve and Connector Replacement and Improvement Program Social of Cellulose ethers 100025.1 Flanged - Gasket Yes Not Applicable	100025.1 Flanged - Gasket Yes Not Applicable 100359.1 Flanged - Gasket Yes Not Applicable 100491.15 Flanged - Gasket Yes Not Applicable
ocel ™ cellulose ethers 100359.1 Flanged - Gasket Tes Not Applicable	100359.1 Flanged - Gasket Yes Not Applicable 100491.15 Flanged - Gasket Yes Not Applicable
Ves Not Applicable	100491.15 Flanged - Gasket Yes Not Applicable Ves Not Applicable
	100491.15 Flangeu - Gasket Ves Not Applicable
ocel ™ cellulose ethers 100491.15 Flangeu - Gasket	
ocel ™ cellulose ethers 101243 Flanged - Gasket Yes Not Applicable	
Not Applicable Threaded Yes Not Applicable	Not Applicable

.G.38	38. Replacing or Improving Connectors.
/ G 38 a	a. Trigger for Replacement or Improvement Requirements. For each connector that, in any two of three consecutive monitoring periods, has a Screening Value at or above 250 ppm, Dow a. Trigger for Replacement or Improvement Requirements. For each connector that, in any two of three consecutive monitoring periods, has a Screening Value at or above 250 ppm, Dow a. Trigger for Replacement or Improvement described in Paragraph 36. Dow shall use best efforts to install a replacement or shall replace or improve the connector in accordance with the applicable replacement or improvement described in Paragraph 36. Dow shall use best efforts to install a replacement or improvement that will be the least likely to leak, using good engineering judgment, for the service, operating conditions, and type of piping or tubing that the connector is in.
/,G.38.b	b. Timing. If the replacement or improvement does not require a process unit shutdown, Dow shall undertake the replacement or improvement by no later than one month after the monitoring event that triggers the replacement or improvement requirement. If the replacement or improvement to replace or improve the connector, unless Dow documents that or improvement during the first Maintenance Shutdown that follows the monitoring event that triggers the requirement to replace or improve the connector, unless Dow documents that or improvement during the first Maintenance Shutdown that follows the monitoring event and the Maintenance Shutdown to enable Dow to secure and install the replacement or improvement. In that case, Dow shall undertake the replacement or improvement at the next Maintenance Shutdown that occurs after Dow's receipt of the necessary materials.
V.G.38.c	c. Actions Required Pending Replacements or Improvements Pursuant to Subparagraphs 38.a b.
V.G.38.c.i	i. Actions Required Pursuant to Subsection E. Dow shall not be required to comply with Subsection E pending replacement or improvement pursuant to Subparagraphs 38.a b if Dow i. Actions Required Pursuant to Subsection E. Dow shall not be required to comply with Subsection E pending replacement or improvement to Subsection E. Dow shall not be required to complete the replacement or improvement by the date that is no later than one month after detecting the leak. If Dow does not complete the replacement or improvement within one month, Dow shall comply month, or if, at the time of the leak detection, Dow reasonably can anticipate that it might not be able to complete the replacement or improvement within one month, Dow shall comply with all applicable requirements of Subsection E.
V.G.38.c.ii	ii. Actions Required Pursuant to Applicable Regulations. For each connector that has a Screening Value at or above 500 ppm, Dow shall comply with all applicable regulatory requirement including repair and "delay of repair," pending replacement or improvement pursuant to Subparagraphs 38.a b.

Ethocel ™ cellulose ethers	
Appendix V.G: Valve and Connector Replacement and Improvement Progr	am Report
Amandix V. G. Valve and Connector Replacement and Improvement 105.	
Appendix V.G: Valve and Conflector Replacement Date Action Was Taken and Any Actions Not Taken and S	schedule for Known Replace

Covered Process Unit	Connector Tag #	Monitoring Dates and Screening Values (ppm) That Trigger Replacement or Improvement	Date Action Man	Any Actions Not Taken and Why	Schedule for Known Replacements, Improvements, or Eliminations
Ethocel ™ cellulose ethers		6/8/2012 - 279 ppm 3/4/2013 - 423 ppm	Like for like replacement of threaded connector.	Replacement or improvement did not occur within one month of the trigger date. See VI.53.b Attachment 1 for details.	Not Applicable
Ethocel ™ cellulose ethers	100557	12/12/12 - 351 ppm 3/8/2013 - 376 ppm	Maintenance Shutdown Required: Replaced flanged connector gasket on 5/8/2014 during the first maintenance shutdown after discovering this connector triggered replacement or improvement.	frame. See VI.53.b Attachment 1 for details.	Not Applicable
		ilize any valve, valve packing techi	pology, or connector that is not a	ppropriate for its intended u	ise in a Covered Process Unit.

V.G.40 In each Compliance Status Report due under Section VI (Reporting Requirements) of this Decree, Dow shall include a separate section in the Report that: (i) describes the actions it took to comply with this Subsection G, including identifying each piece of equipment that triggered a requirement in Subsection G, the Screening Value for that piece of equipment, the type of comply with this Subsection G, including identifying each piece of equipment that triggered a requirement in Subsection G, the Screening Value for that piece of equipment, the type of comply with this Subsection G, including identifying each piece of equipment that triggered a requirement in Subsection G, the Screening Value for that piece of equipment, and the date when the action was taken; (ii) identifies any required actions that were not taken and explains why; and (iii) action taken (i.e., replacement, repacking, or improvements, or eliminations.

	Commencing no later than Dow shall implement the p connectors that are Covere exclude pressure relief valve	November 23, 2011						
	List of all Existing Valves in the Effective Date of this Co Process Unit, that are in ex							
.G.30	Pro-Active Initial Valve Tightening Work Practices Relating to each New Valve that is Installed and each Existing Valve that is Repacked. Dow shall undertake the following work practices were pro-Active Initial Valve Tightening Work Practices Relating to each New Valve that is Installed and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve respect to each new valve that is subject to LDAR that is installed (whether the new valve replaces an Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve is repacked. It is practice in the Covered Process Unit and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve or in newly added to the Covered Process Unit) and each Existing Valve or in newly added to the Covered Process Uni							
/.G.30.a	nut or packing torque; or (ii) any appropriate tightness	that will minimize the potential to	Lingitive etilission teaks of				
7,G.30.b	shall tighten the packing gl	or more than two weeks afte land nuts or their equivalent mission leaks of any magnitu	(e.g., pushers) to: (i) the manuac	turei 31econimenaca gia		oad on the valve packing and, if necessary, any appropriate tightness that will minimize		
Data	Covered Process Unit	Valve Description	New Valve or	Installation Date	In Service Date	Date of Valve Packing Load Re-Ched		
Commence of the Commence of th	owered in cost	and/or Tag #	Repacked/Replaced Existing Valve					
Commence of the Commence of th	Low Gloss ABS Unit	His Nation and a substitute of the control of the c	建二甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基	7/31/2013	7/31/2013	8/9/2013		
		and/or Tag # 1226 V-105 2" Jamesbury	Valve New	7/31/2013 7/31/2013	7/31/2013 7/31/2013	8/9/2013 8/9/2013		
/.G.30.a−b	Low Gloss ABS Unit	and/or Tag # 1226 V-105 2" Jamesbury BV(vb150cs111vnrf) 1226 V-106 2" Jamesbury	Valve New					
Commence of the Commence of th	Low Gloss ABS Unit Low Gloss ABS Unit	and/or Tag # 1226 V-105 2" Jamesbury BV(vb150cs111vnrf) 1226 V-106 2" Jamesbury BV(vb150cs111vnrf) 1226 V-107East 2" Jamesbury	New New	7/31/2013	7/31/2013	8/9/2013		
	Low Gloss ABS Unit Low Gloss ABS Unit Low Gloss ABS Unit	and/or Tag # 1226 V-105 2" Jamesbury BV(vb150cs111vnrf) 1226 V-106 2" Jamesbury BV(vb150cs111vnrf) 1226 V-107East 2" Jamesbury BV(vb150cs111vnrf) 1226 V-107West 2" Jamesbury	New New	7/31/2013 7/31/2013	7/31/2013 7/31/2013	8/9/2013 8/9/2013		

	alve and Con	Repacked/Replaced	9/11/2013	9/11/2013	9/23/2013
w Gloss ABS Unit		Repacked/Replaced	9/13/2013	9/13/2013	9/23/2013
w Gloss ABS Unit	72248	Repacked/Replaced	9/17/2013	9/17/2013	9/22/2013
ow Gloss ABS Unit	10330	Repacked/Replaced	9/19/2013	9/19/2013	9/23/2013
ow Gloss ABS Unit	00107		9/27/2013	9/27/2013	10/8/2013
ow Gloss ABS Unit	102220	Repacked/Replaced	3/2//2013		
ow Gloss ABS Unit	1226 V-106 2" Jamesbury BV(vb150cs111vnrf)	New	10/1/2013	10/2/2013	10/8/2013
	1226 V-107 east 2" Jamesbury BV(vb150cs111vnrf)	New	10/1/2013	10/2/2013	10/8/2013
ow Gloss ABS Unit	1226 V-107West 2" Jamesbury BV(vb150cs111vnrf)	New	10/1/2013	10/2/2013	10/8/2013
ow Gloss ABS Unit	1226 V-105 2" Jamesbury BV(vb150cs111vnrf)	New	10/1/2013	10/2/2013	10/8/2013
Clara ADS Unit	1226 recirc 2"KTMBV(vb150cs111vnr f)	New	10/1/2013	10/2/2013	10/8/2013
Low Gloss ABS Unit	15597	Repacked/Replaced	11/13/2013	11/13/2013	11/18/2013
ow Gloss ABS Unit	16916	Repacked/Replaced	11/13/2013	11/13/2013	11/18/2013
Low Gloss ABS Unit	97682	Repacked/Replaced	12/4/2013	12/4/2013	12/9/2013
ow Gloss ABS Unit	3793	Repacked/Replaced	2/12/2014	2/12/2014	2/17/2014
ow Gloss ABS Unit	103231	Repacked/Replaced	2/24/2014	2/26/2014	3/3/2014
ow Gloss ABS Unit	3390	Repacked/Replaced	2/25/2014	2/25/2014	2/28/2014
ow Gloss ABS Unit		Repacked/Replaced	3/4/2014	3/4/2014	3/10/2014
Low Gloss ABS Unit	15903	Repacked/Replaced	3/6/2014	3/6/2014	3/10/2014
Low Gloss ABS Unit	103233	Repacked/Replaced	3/6/2014	3/6/2014	3/10/2014
Low Gloss ABS Unit	108959	Repacked/Replaced	3/24/2014	4/9/2014	4/12/2014
Low Gloss ABS Unit	17605	Repacked/Replaced	3/31/2014	4/5/2014	4/8/2014
Low Gloss ABS Unit	18822	Repacked/Replaced	3/31/2014	4/5/2014	4/8/2014
Low Gloss ABS Unit	18711	Repacked/Replaced	3/31/2014	4/5/2014	4/8/2014

	alve and Con	Repacked/Replaced	3/31/2014	4/5/2014	4/8/2014
w Gloss ABS Unit		Repacked/Replaced	3/31/2014	4/5/2014	4/8/2014
w Gloss ABS Unit	1003 (3	Repacked/Replaced	3/31/2014	4/9/2014	4/12/2014
w Gloss ABS Unit	1,12		3/31/2014	4/9/2014	4/12/2014
w Gloss ABS Unit		Repacked/Replaced		4/5/2014	4/8/2014
w Gloss ABS Unit	17885	Repacked/Replaced	3/31/2014	4/3/2021	
ow Gloss ABS Unit	A-Train Condenser Liquid out to receiver Tagged VB300SS711VARF	New	3/31/2014	4/5/2014	4/8/2014
ow Gloss ABS Unit	A-Train Condenser Drain on liquid out line Tagged VG-800SS2BST	New .	3/31/2014	4/5/2014	4/8/2014
ow Gloss ABS Unit	A-Train Condenser Vapor line steam connection Tagged VB- 150SS311VNRF	New	3/31/2014	4/5/2014	4/8/2014
ow Gloss ABS Unit	A-Train Condenser Spare 2" nozzle on top Tagged VB-150SS311VNRF	New	3/31/2014	4/5/2014	4/8/2014
.ow Gloss ABS Unit	A-Train Partial Condenser Liquid drain line to receiver Tagged VB- 150SS311VNRF KTM EB732-32EU-15L/3.0	New	3/31/2014	4/5/2014	4/8/2014
ow Gloss ABS Unit	A-Train R2 Recycle Z4 FT Inlet Tagged VB- 150SS311VNRF	New	3/31/2014	4/5/2014	4/8/2014
ow Gloss ABS Unit	A-Train R2 Recycle Z4 FT Outlet Tagged VB- 150SS311VNRF	New	3/31/2014	4/5/2014	4/8/2014
Low Gloss ABS Unit	A-Train R2 Recycle Z4 FT Upstream Drain Tagged VB-150SS311VNRF	New	3/31/2014	4/5/2014	4/8/2014

	A-Train R2 Recycle Z4 FT				1
	Downstream Drain		ļ		
	Tagged VB-		1	4 /F /DO4 4	4/8/2014
Low Gloss ABS Unit		New	3/31/2014	4/5/2014	4/8/2014
	A-Train R2 Recycle Z4 FT				
	Bypass Tagged VB-			. 15 1004	4/8/2014
Low Gloss ABS Unit	150SS311VNRF	New	3/31/2014	4/5/2014	4/8/2014
	A-Train R2 Recycle Z4 CV				
	Inlet Tagged VB-			4/5/2014	4/8/2014
Low Gloss ABS Unit		New	3/31/2014	4/5/2014	4/8/2014
	A-Train R2 Recycle Z4 CV				
	Outlet Tagged VB-			1/5 (2014	4/8/2014
Low Gloss ABS Unit		New	3/31/2014	4/5/2014	4/0/2014
	A-Train R2 Recycle Z4 CV				
	Drain Tagged VB-			A /C /2014	4/8/2014
Low Gloss ABS Unit		New	3/31/2014	4/5/2014	4/0/2014
	A-Train R2 Recycle Z4 CV				
	Bypass Tagged VB-			A (E /201 A	4/8/2014
Low Gloss ABS Unit	150SS311VNRF	New	3/31/2014	4/5/2014	4/8/2014
	A-Train R2 Recycle Z5 FT				
	Inlet Tagged VB-			1/5/2014	4/8/2014
Low Gloss ABS Unit	150SS311VNRF	New	3/31/2014	4/5/2014	4/8/2014
	A-Train R2 Recycle Z5 FT				
	Outlet Tagged VB-		- 1- 1 - 1	4/5/2014	4/8/2014
Low Gloss ABS Unit	150SS311VNRF	New	3/31/2014	4/5/2014	4/8/2014
	1 - 1 - DO D - 1 - 75 FT				
	A-Train R2 Recycle Z5 FT				
	Upstream Drain Tagged	Now	3/31/2014	4/5/2014	4/8/2014
Low Gloss ABS Unit	VB-150SS311VNRF	New	3/31/2014	1/5/2021	
	A-Train R2 Recycle Z5 FT				
	Downstream Drain				
	Tagged VB-	Nove	3/31/2014	4/5/2014	4/8/2014
Low Gloss ABS Unit	150SS311VNRF	New	3/31/2014	1/0/2021	
	A Train D3 Bassala 75 ET				
	A-Train R2 Recycle Z5 FT				
	Bypass Tagged VB-	New	3/31/2014	4/5/2014	4/8/2014
Low Gloss ABS Unit	150SS311VNRF	INCM	3,31,2017	7-7	
	A-Train R2 Recycle Z5 CV				
İ	Inlet Tagged VB-		2/21/2014	4/5/2014	4/8/2014
Low Gloss ABS Unit	150SS311VNRF	New	3/31/2014	4/3/2014	[7/0/2017

	A-Train R2 Recycle Z5 CV				
	Outlet Tagged VB-			4/5/2014	4/8/2014
ow Gloss ABS Unit	150SS311VNRF	New	3/31/2014	4/5/2014	40,202
	A-Train R2 Recycle Z5 CV				
	Drain Tagged VB-	Now	3/31/2014	4/5/2014	4/8/2014
ow Gloss ABS Unit	150SS311VNRF	New			
	A-Train R2 Recycle Z5 CV				
	Bypass Tagged VB-			4 (5 10 04 4	4/8/2014
ow Gloss ABS Unit		New	3/31/2014	4/5/2014	4/0/2014
	A-Train R2 Recycle Z6 FT				
Class ABC Unit	Inlet Tagged VB- 150SS311VNRF	New	3/31/2014	4/5/2014	4/8/2014
ow Gloss ABS Unit	1000001171111				
	A-Train R2 Recycle Z6 FT	į			
	Outlet Tagged VB-			4/5/2014	4/8/2014
ow Gloss ABS Unit	150SS311VNRF	New	3/31/2014	4/3/2014	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	- 4 BB B - 1- 70 IT	ļ			
	A-Train R2 Recycle Z6 FT Upstream Drain Tagged				
Low Gloss ABS Unit	VB-150SS311VNRF	New	3/31/2014	4/5/2014	4/8/2014
LOW Gloss Aps Offic	A-Train R2 Recycle Z6 FT				
	Downstream Drain				
	Tagged VB-			4/5/2014	4/8/2014
Low Gloss ABS Unit	150SS311VNRF	New	3/31/2014	4/5/2014	1,3,202
	A-Train R2 Recycle Z6 FT				
	Bypass Tagged VB-	İ			. / . /
Low Gloss ABS Unit	150SS311VNRF	New	3/31/2014	4/5/2014	4/8/2014
FOA GIO33 MD3 O1114					
	A-Train R2 Recycle Z6 CV	Į.			
	Inlet Tagged VB-		2/24/2014	4/5/2014	4/8/2014
Low Gloss ABS Unit	150SS311VNRF	New	3/31/2014	14/3/2014	
	A-Train R2 Recycle Z6 CV		<u> </u>		
	Outlet Tagged VB-				
Low Gloss ABS Unit	150SS311VNRF	New	3/31/2014	4/5/2014	4/8/2014

ow Gloss ABS Unit	A-Train R2 Recycle Z6 CV Drain Tagged VB- 150SS311VNRF	New	3/31/2014	4/5/2014	4/8/2014
ow Gloss ABS Unit	A-Train R2 Recycle Z6 CV Bypass Tagged VB- 150SS311VNRF	New	3/31/2014	4/5/2014	4/8/2014
ow Gloss ABS Unit	17452	Repacked/Replaced	4/2/2014	4/9/2014	4/12/2014
ow Gloss ABS Unit	102286	Repacked/Replaced	4/2/2014	4/9/2014	4/12/2014
ow Gloss ABS Unit	16977	Repacked/Replaced	4/2/2014	4/9/2014	4/12/2014
ow Gloss ABS Unit	17862	Repacked/Replaced	4/3/2014	4/9/2014	4/12/2014
ow Gloss ABS Unit	97707	Repacked/Replaced	4/3/2014	4/9/2014	4/12/2014
_ow Gloss ABS Unit	B-Train SVT Tank Bottom Drain	New	4/5/2014	4/9/2014	4/12/2014
.ow Gloss ABS Unit	B-Train SVT N Tank PSV Drain	New	4/5/2014	4/9/2014	4/12/2014
Low Gloss ABS Unit	B-Train SVT S Tank PSV Drain	New	4/5/2014	4/9/2014	4/12/2014
Low Gloss ABS Unit	B-Train Devo 1 Recycle Out P-5001A PI Isolation	New	4/5/2014	4/9/2014	4/12/2014
Low Gloss ABS Unit	B-Train Devo 1 Recycle Out P-5001A PI Drain	New	4/5/2014	4/9/2014	4/12/2014
Low Gloss ABS Unit	B-Train Devo 1 Recycle Out P-5001A Discharge	New	4/5/2014	4/9/2014	4/12/2014
Low Gloss ABS Unit	B-Train Devo 1 Recycle Out P-5001B PI Isolation	New	4/5/2014	4/9/2014	4/12/2014

	t productiva je productiva i pr	<u> </u>		
I	New	4/5/2014	4/9/2014	4/12/2014
Odt i 30018 i i bidii				-
B-Train Devo 1 Recycle				
Out P-5001B Discharge	New	4/5/2014	4/9/2014	4/12/2014
B-Train Devo 1 Recycle				
Out Drain Above P-				
5001A/B	New	4/5/2014	4/9/2014	4/12/2014
B-Train Devo 1 Recycle			4/0/2014	4/12/2014
Out Sampler Inlet	New	4/5/2014	4/9/2014	4/12/2014
	j		Į	
•		4/5/2014	4/9/2014	4/12/2014
Out Sampler Outlet	New	4/3/2014	7/3/2017	
· ·	Naw	4/5/2014	4/9/2014	4/12/2014
Out Sampler By-pass	MCAA			
P Train Doyo 1 Recycle				
1	New	4/5/2014	4/9/2014	4/12/2014
B-Train Devo 1 Recycle				
Out Filter Inlet	New	4/5/2014	4/9/2014	4/12/2014
		•		
B-Train Devo 1 Recycle				1/40/2014
Out Filter Inlet Drain	New	4/5/2014	4/9/2014	4/12/2014
B-Train Devo 1 Recycle		4/5/2014	A /9/2014	4/12/2014
Out Filter Outlet Drain	New	4/5/2014	4/3/2014	77 117 117
1	Naw	4/5/2014	4/9/2014	4/12/2014
Out Filter Outlet	IACAA	77 20 4 1		
1			1	
B-Train Devo 1 Recycle				\
	B-Train Devo 1 Recycle Out Drain Above P- 5001A/B B-Train Devo 1 Recycle Out Sampler Inlet B-Train Devo 1 Recycle Out Sampler Outlet B-Train Devo 1 Recycle Out Sampler By-pass B-Train Devo 1 Recycle Out Sampler B-Train Devo 1 Recycle Out Filter Inlet B-Train Devo 1 Recycle Out Filter Inlet B-Train Devo 1 Recycle Out Filter Inlet B-Train Devo 1 Recycle	Out P-5001B PI Drain B-Train Devo 1 Recycle Out P-5001B Discharge B-Train Devo 1 Recycle Out Drain Above P- 5001A/B B-Train Devo 1 Recycle Out Sampler Inlet B-Train Devo 1 Recycle Out Sampler Outlet B-Train Devo 1 Recycle Out Sampler By-pass B-Train Devo 1 Recycle Out Sampler B-Train Devo 1 Recycle Out Sampler B-Train Devo 1 Recycle Out Filter Inlet B-Train Devo 1 Recycle Out Filter Inlet Drain B-Train Devo 1 Recycle Out Filter Outlet Drain B-Train Devo 1 Recycle Out Filter Outlet Drain New	Out P-5001B PI Drain New 4/5/2014 B-Train Devo 1 Recycle Out P-5001B Discharge New 4/5/2014 B-Train Devo 1 Recycle Out Drain Above P- 5001A/B New 4/5/2014 B-Train Devo 1 Recycle Out Sampler Inlet New 4/5/2014 B-Train Devo 1 Recycle Out Sampler Outlet New 4/5/2014 B-Train Devo 1 Recycle Out Sampler By-pass New 4/5/2014 B-Train Devo 1 Recycle Out Sampler New 4/5/2014 B-Train Devo 1 Recycle Out Filter Inlet New 4/5/2014 B-Train Devo 1 Recycle Out Filter Inlet New 4/5/2014 B-Train Devo 1 Recycle Out Filter Inlet Drain New 4/5/2014 B-Train Devo 1 Recycle Out Filter Outlet Drain New 4/5/2014	Dut P-5001B PI Drain New 4/5/2014 4/9/2014

	B-Train Devo 1 Recycle		A /F /201 A	4/9/2014	4/12/2014
w Gloss ABS Unit	Out Flowmeter Inlet	New	4/5/2014	47.572.024	
	D T / D vs 4 Danielo				
	B-Train Devo 1 Recycle Out Flowmeter Drain	New	4/5/2014	4/9/2014	4/12/2014
w Gloss ABS Unit	Out Flowingter Drain	i de su			
	B-Train Devo 1 Recycle			- (0 (00.4	4/12/2014
w Gloss ABS Unit	Out Flowmeter Outlet	New	4/5/2014	4/9/2014	4/12/2014
	D. Turin David 1 Bacuslo				
Chara ARC Limit	B-Train Devo 1 Recycle Out Flowmeter By-pass	New	4/5/2014	4/9/2014	4/12/2014
w Gloss ABS Unit	Out Flowineter by pass	,,,,,,			
	B-Train Devo 1 Recycle		(4/9/2014	4/12/2014
w Gloss ABS Unit	Out Control Valve Inlet	New	4/5/2014	4/9/2014	7,11,2011
	B-Train Devo 1 Recycle				
w Gloss ABS Unit	Out Control Valve Drain	New	4/5/2014	4/9/2014	4/12/2014
	B-Train Devo 1 Recycle		4/5/2014	4/9/2014	4/12/2014
w Gloss ABS Unit	Out Control Valve	New	4/3/2014	1,0,200	
	B-Train Devo 1 Recycle				
w Gloss ABS Unit	Out Control Valve By-pass	New	4/5/2014	4/9/2014	4/12/2014
	n T. I. D. vs 4 Passiele				
	B-Train Devo 1 Recycle Out Line Drain On By-pass				
ow Gloss ABS Unit	line	New	4/5/2014	4/9/2014	4/12/2014
JW GIUSS ABS OTHE	ALL C				
	B-Train Devo 2 Recycle			4/0/2014	4/12/2014
w Gloss ABS Unit	Out P-5001C PI Isolation	New	4/5/2014	4/9/2014	77,22,2017
	B-Train Devo 2 Recycle				
ow Gloss ABS Unit	Out P-5001A PI Drain	New	4/5/2014	4/9/2014	4/12/2014

	B-Train Devo 2 Recycle				
Class ARC Unit	Out P-5001A Discharge	New	4/5/2014	4/9/2014	4/12/2014
ow Gloss ABS Unit	Out P-3001A Discharge	THE SW			
	B-Train Devo 2 Recycle			. (2 (2 2 2	4/12/2014
ow Gloss ABS Unit	Out P-50018 PI Isolation	New	4/5/2014	4/9/2014	4/12/2014
	B-Train Devo 2 Recycle				
ow Gloss ABS Unit	Out P-50018 PI Drain	New	4/5/2014	4/9/2014	4/12/2014
	B-Train Devo 2 Recycle		:		
ow Gloss ABS Unit	Out P-5001B Discharge	New	4/5/2014	4/9/2014	4/12/2014
	B-Train Devo 2 Recycle				
ow Gloss ABS Unit	Out Drain Above P- 5001A/B	New	4/5/2014	4/9/2014	4/12/2014
	B-Train Devo 2 Recycle	New	4/5/2014	4/9/2014	4/12/2014
ow Gloss ABS Unit	Out Sampler Inlet	New	7,3,2017		
	B-Train Devo 2 Recycle			4/0/2014	4/12/2014
ow Gloss ABS Unit	Out Sampler Outlet	New	4/5/2014	4/9/2014	4/12/2014
	B-Train Devo 2 Recycle				
ow Gloss ABS Unit	Out Sampler By-pass	New	4/5/2014	4/9/2014	4/12/2014
	B-Train Devo 2 Recycle				
ow Gloss ABS Unit	OutSampler	New	4/5/2014	4/9/2014	4/12/2014
ow Gloss ABS Unit	B-Train Devo 2 Recycle Out Filter Inlet	New	4/5/2014	4/9/2014	4/12/2014
ow Gloss ABS Unit	B-Train Devo 2 Recycle Out Filter Inlet Drain	New	4/5/2014	4/9/2014	4/12/2014
DW GIOSS ABS UTIL	Out the line Dail				
	B-Train Devo 2 Recycle		4/5/2014	4/9/2014	4/12/2014
ow Gloss ABS Unit	Out Filter Outlet Drain	New	4/5/2014	H/ 3/ 2014	1 1//

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	B-Train Devo 2 Recycle		ì		
w Gloss ABS Unit	Out Filter Outlet	New	4/5/2014	4/9/2014	4/12/2014
W Globar to a mar				İ	
	B-Train Devo 2 Recycle			4/9/2014	4/12/2014
w Gloss ABS Unit	Out Filter By-pass	New	4/5/2014	4/9/2014	-,
w Gloss ABS Unit	B-Train Devo 2 Recycle Out Isolation to Pl	New	4/5/2014	4/9/2014	4/12/2014
W Gloss Abs Offic	Out Isolation to 11				
	B-Train Devo 2 Recycle			4 10 1204 4	4/12/2014
w Gloss ABS Unit	Out Drain to PI	New	4/5/2014	4/9/2014	14/12/2014
	B-Train Devo 2 Recycle Out Flowmeter Inlet	New	4/5/2014	4/9/2014	4/12/2014
w Gloss ABS Unit	Out Flowmeter filet	IVEW			
	B-Train Devo 2 Recycle		<u> </u>		. (42/224
w Gloss ABS Unit	Out Flowmeter Drain	New	4/5/2014	4/9/2014	4/12/2014
	B-Train Devo 2 Recycle	Blove	 4/5/2014	4/9/2014	4/12/2014
ow Gloss ABS Unit	Out Flowmeter Outlet	New	1,3,2021		
	B-Train Devo 2 Recycle				
ow Gloss ABS Unit	Out Flowmeter By-pass	New	4/5/2014	4/9/2014	4/12/2014
		Ţ			
	B-Train Devo 2 Recycle		4/5/2014	4/9/2014	4/12/2014
ow Gloss ABS Unit	Out Control Valve Inlet	New	4/5/2014	1,2,5.02	
	B-Train Devo 2 Recycle				
ow Gloss ABS Unit	Out Control Valve Drain	New	4/5/2014	4/9/2014	4/12/2014
5 tt 0.000 / tb0 0.110					
	B-Train Devo 2 Recycle		A /F /2014	4/9/2014	4/12/2014
ow Gloss ABS Unit	Out Control Valve	New	4/5/2014	4/ 3/ 2017	
	D.T. 1 D. D.D				
Low Gloss ABS Unit	B-Train Devo 2 Recycle Out Control Valve By-pa:	ac New	4/5/2014	4/9/2014	4/12/2014

oggg,∎nes≡neggenesse og differen (film)	T		Repacked/Replaced	5/9/2014	5/9/2014	5/12/2014				
	Low Gloss ABS Unit			7/2/2014	7/2/2014	7/5/2014				
	Low Gloss ABS Unit	13323	Repacked/Replaced	a reconstitution this	t oach new valve (other than a V	alve that serves as the closure device on an ope ed with Low-E Packing. This requirement appli				
G.31	ended line) that it install to entirely new valves th	s in each Covered Process Unit at are added to a Covered Pro	, and that, when installed, will t cess Unit and to Existing Valves	that are replaced for an	y reason in a Covered Process Ur	nit.				
G.31.a	Paragraph 31 shall not apply in emergencies or exigent circumstances requiring immediate installation or replacement of a valve where a Low-E Valve or Low-E Packing is not available on a timely basis. Any such instance shall be reported in the next ELP compliance status report. Paragraph 31 shall not apply to valves that are installed temporarily for a short term purpose and then removed (e.g., valves connecting a portion of the Covered Process Unit to a testing									
G.31.b	Paragraph 31 shall not a device.)									
ata V.G.31	Covered Process Unit	Valve Tag # or Description	Low E Technology Installed (Yes or No)	If Low E Technolog unavailable", see A Unavailability)	y not used, explain (if "commerci ppendix V.G. 34 and Commercia	dity 				
	Low Gloss ABS Unit	1226 V-105 2" Jamesbury BV(vb150cs111vnrf)	No	See I	ow Gloss Appendix V.G.34					
	Low Gloss ABS Unit	1226 V-106 2" Jamesbury BV(vb150cs111vnrf)	No	See I	Low Gloss Appendix V.G.34					
	Low Gloss ABS Unit	1226 V-107East 2" Jamesbury BV(vb150cs111vnrf)	No	See	Low Gloss Appendix V.G.34					
	Low Gloss ABS Unit	1226 V-107West 2" Jamesbury BV(vb150cs111vnrf)	No	See	Low Gloss Appendix V.G.34					
	Low Gloss ABS Unit	1226 by PT N:AI-287 top of V-05 East 1" Jamesbury BV(vb150cs111vnrf)	No	See	Low Gloss Appendix V.G.34					
	Low Gloss ABS Unit	1226 V-106 2" Jamesbury BV(vb150cs111vnrf)	No	See	Low Gloss Appendix V.G.34					
	Low Gloss ABS Unit	1226 V-107 east 2" Jamesbury BV(vb150cs111vnrf)	No	See	Low Gloss Appendix V.G.34					

	1226 V-107West 2" Jamesbury		See Low Gloss Appendix V.G.34
w Gloss ABS Unit	BV(vb150cs111vnrf)	No	See Low Gloss Appendix V.0.34
ow Gloss ABS Unit	1226 V-105 2" Jamesbury BV(vb150cs111vnrf)	No	See Low Gloss Appendix V.G.34
0.000	1226 recirc		
	2"KTMBV(vb150cs111vnr		See Łow Gloss Appendix V.G.34
ow Gloss ABS Unit	f)	No	See tow Gloss Appendix V.O.5-F
	A-Train Condenser Liquid	!	
	out to receiver Tagged		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
ow Gloss ABS Unit	VB300SS711VARF	No	See Low Gloss Appendix V.G.34
	A-Train Condenser Drain		
	on liquid out line Tagged	V	See Low Gloss Appendix V.G.35
ow Gloss ABS Unit	VG-800SS2BST	Yes	
	A-Train Condenser Vapor		
	line steam connection		
	Tagged VB-	No	See Low Gloss Appendix V.G.34
Low Gloss ABS Unit	150SS311VNRF	INO	
	A-Train Condenser Spare		
	2" nozzle on top Tagged	•	
Class ADC I hit	VB-150SS311VNRF	No	See Low Gloss Appendix V.G.34
Low Gloss ABS Unit	VB-130333217444		
	A-Train Partial Condense	r	
	Liquid drain line to		
	receiver Tagged VB-		
	150SS311VNRF		S Law Class Annandiy V G 24
Low Gloss ABS Unit	KTM EB732-32EU-15L/3.		See Low Gloss Appendix V.G.34
<u> </u>	A-Train R2 Recycle Z4 FT		
	Inlet Tagged VB-		See Low Gloss Appendix V.G.34
Low Gloss ABS Unit	150SS311VNRF	No	266 Fam Gloss Whhellank 4.0.34
	A-Train R2 Recycle Z4 FT		
	Outlet Tagged VB-		See Low Gloss Appendix V.G.34
Low Gloss ABS Unit	150SS311VNRF	No	Jee Low Gloss/Appendix Crots

en general en en en general en en en en en en en en en en en en en	A-Train R2 Recycle Z4 FT		
	Upstream Drain Tagged		and the VC 24
ow Gloss ABS Unit	VB-150SS311VNRF	No	See Low Gloss Appendix V.G.34
	A-Train R2 Recycle Z4 FT		
	Downstream Drain		
	Tagged VB-		T
ow Gloss ABS Unit	150SS311VNRF	No	See Low Gloss Appendix V.G.34
	A-Train R2 Recycle Z4 FT		
	Bypass Tagged VB-		
ow Gloss ABS Unit	150SS311VNRF	No	See Low Gloss Appendix V.G.34
	A-Train R2 Recycle Z4 CV		
	Inlet Tagged VB-		
ow Gloss ABS Unit	150SS311VNRF	No	See Low Gloss Appendix V.G.34
	A-Train R2 Recycle Z4 CV		
	Outlet Tagged VB-		
Low Gloss ABS Unit	150SS311VNRF	No	See Low Gloss Appendix V.G.34
	A-Train R2 Recycle Z4 CV		
	Drain Tagged VB-		
Low Gloss ABS Unit	150SS311VNRF	No	See Low Gloss Appendix V.G.34
	A-Train R2 Recycle Z4 CV		
	Bypass Tagged VB-		
Low Gloss ABS Unit	150SS311VNRF	No	See Low Gloss Appendix V.G.34
2017 010201122 01112	A-Train R2 Recycle Z5 FT		
	Inlet Tagged VB-		
Low Gloss ABS Unit	150SS311VNRF	No	See Low Gloss Appendix V.G.34
	A-Train R2 Recycle Z5 FT		
	Outlet Tagged VB-		
Low Gloss ABS Unit	150SS311VNRF	No	See Low Gloss Appendix V.G.34
	A-Train R2 Recycle Z5 FT		
	Upstream Drain Tagged		
Low Gloss ABS Unit	VB-150SS311VNRF	No	See Low Gloss Appendix V.G.34
2011 01000 7100 01111	A-Train R2 Recycle Z5 FT		
	Downstream Drain		
	Tagged VB-		
Low Gloss ABS Unit	150SS311VNRF	No	See Low Gloss Appendix V.G.34
2017 01033 7 103 0 III C			
	A-Train R2 Recycle Z5 FT		
	Bypass Tagged VB-		
Low Gloss ABS Unit	150SS311VNRF	No	See Low Gloss Appendix V.G.34
COM GIOSS AND GIRE	A-Train R2 Recycle Z5 CV		
	Inlet Tagged VB-		
Low Gloss ABS Unit	150SS311VNRF	No	See Low Gloss Appendix V.G.34

	A-Train R2 Recycle Z5 CV		ement and improvement	
	Outlet Tagged VB-		Class Annondiv V G 24	
w Gloss ABS Unit	1300551	No	See Low Gloss Appendix V.G.34	
	A-Train R2 Recycle Z5 CV			
	Drain Tagged VB-		W 1/ C 24	
w Gloss ABS Unit	1 1	No	See Low Gloss Appendix V.G.34	
W C10337 (65 01.114	A-Train R2 Recycle Z5 CV			
	Bypass Tagged VB-			
w Glass ABS Unit		No	See Low Gloss Appendix V.G.34	
W Gloss Abb Offic	A-Train R2 Recycle Z6 FT			
	Inlet Tagged VB-			
w Glass ABS Unit	; == I	No	See Low Gloss Appendix V.G.34	
M GIOSS ADS OUIT	A-Train R2 Recycle Z6 FT			
	Outlet Tagged VB-			
OL ADC Heir		No	See Low Gloss Appendix V.G.34	
ow Gloss ABS Unit	A-Train R2 Recycle Z6 FT			
	Upstream Drain Tagged			
		No	See Low Gloss Appendix V.G.34	
ow Gloss ABS Unit	A-Train R2 Recycle Z6 FT	140		
	Downstream Drain			
	Tagged VB-	Ni~	See Low Gloss Appendix V.G.34	
ow Gloss ABS Unit	150SS311VNRF	No		
	Į			
	A-Train R2 Recycle Z6 FT			
	Bypass Tagged VB-		ml	
ow Gloss ABS Unit	150SS311VNRF	No	See Low Gloss Appendix V.G.34	
01. 010301100 0111	1 7 1 P2 P-1-1-75 CV			
	A-Train R2 Recycle Z6 CV			
	Inlet Tagged VB-	a	See Low Gloss Appendix V.G.34	
ow Gloss ABS Unit	150SS311VNRF	No	300 BB. 3.335 / PF	
	A-Train R2 Recycle Z6 CV			
	Outlet Tagged VB-			
ow Gloss ABS Unit	150SS311VNRF	No	See Low Gloss Appendix V.G.34	
OW GIOSS ADS UTIL				
	A-Train R2 Recycle Z6 CV			
	Drain Tagged VB-		See Low Gloss Appendix V.G.34	
ow Gloss ABS Unit	150SS311VNRF	No	See Low Gloss Appendix V.G.34	
	A-Train R2 Recycle Z6 CV			
	Bypass Tagged VB-			
ow Gloss ABS Unit	150SS311VNRF	No	See Low Gloss Appendix V.G.34	

div A.M. Ar	arve una een	IICOLOI IIOP		31 (41) A 10 (41)
and the second s				
	B-Train SVT Tank Bottom			
Low Gloss ABS Unit	Drain	No	See Low Gloss Appendix V.G.34	
	B-Train SVT N Tank PSV			
Low Gloss ABS Unit	Drain	Yes	See Low Gloss Appendix V.G.35	
EOW GIOSS FIRE CITIC				
	B-Train SVT S Tank PSV			
Low Gloss ABS Unit	Drain	Yes	See Low Gloss Appendix V.G.35	
EOW GIOSS ABS UTIL	Diani	100		
	B-Train Devo 1 Recycle	No	See Low Gloss Appendix V.G.34	
Low Gloss ABS Unit	Out P-5001A PI Isolation	NO	Jac Corr Gloss Apparent	
	B-Train Devo 1 Recycle		See Low Gloss Appendix V.G.34	
Low Gloss ABS Unit	Out P-5001A PI Drain	No	See Low Gloss Appendix V.G.34	
	B-Train Devo 1 Recycle			
Low Gloss ABS Unit	Out P-5001A Discharge	No	See Low Gloss Appendix V.G.34	
	B-Train Devo 1 Recycle			
Low Gloss ABS Unit	Out P-5001B PI Isolation	No	See Low Gloss Appendix V.G.34	
	B-Train Devo 1 Recycle			
Low Gloss ABS Unit	Out P-5001B PI Drain	No	See Low Gloss Appendix V.G.34	
FOM GIOSS WOS OTHE	0001 00020 (101011)			
	D. Taria David Barrata			
	B-Train Devo 1 Recycle	No	See Low Gloss Appendix V.G.34	
Low Gloss ABS Unit	Out P-5001B Discharge	INU	300 201 701	
	B-Train Devo 1 Recycle			
	Out Drain Above P-		See Low Gloss Appendix V.G.34	
Low Gloss ABS Unit	5001A/B	No	See Low Gloss Appendix v.G.54	
	B-Train Devo 1 Recycle			
Low Gloss ABS Unit	Out Sampler Inlet	No	See Low Gloss Appendix V.G.34	
	B-Train Devo 1 Recycle			
Low Gloss ABS Unit	Out Sampler Outlet	No	See Low Gloss Appendix V.G.34	

	B-Train Devo 1 Recycle		
w Gloss ABS Unit	Out Sampler By-pass	No	See Low Gloss Appendix V.G.34
	B-Train Devo 1 Recycle		
w Gloss ABS Unit	Out Sampler	No	See Low Gloss Appendix V.G.34
	B-Train Devo 1 Recycle		
w Gloss ABS Unit	Out Filter Inlet	No	See Low Gloss Appendix V.G.34
	B-Train Devo 1 Recycle		n
ow Gloss ABS Unit	Out Filter Inlet Drain	No	See Low Gloss Appendix V.G.34
	B-Train Devo 1 Recycle		
ow Gloss ABS Unit	Out Filter Outlet Drain	No	See Low Gloss Appendix V.G.34
	B-Train Devo 1 Recycle		
ow Gloss ABS Unit	Out Filter Outlet	No	See Low Gloss Appendix V.G.34
	B-Train Devo 1 Recycle	E .	
ow Gloss ABS Unit	Out Filter By-pass	No	See Low Gloss Appendix V.G.34
	B-Train Devo 1 Recycle		0 1 0 1 1 1 1 1 1 0 2 1
ow Gloss ABS Unit	Out Flowmeter Inlet	No	See Low Gloss Appendix V.G.34
	B-Train Devo 1 Recycle		Cool and Class Amendia V.C. 24
ow Gloss ABS Unit	Out Flowmeter Drain	No	See Low Gloss Appendix V.G.34
	B-Train Devo 1 Recycle		Control Chara Annuality 1/ C 3/4
ow Gloss ABS Unit	Out Flowmeter Outlet	No	See Low Gloss Appendix V.G.34
	B-Train Devo 1 Recycle		0) 0 1 Annual Bull C 28
ow Gloss ABS Unit	Out Flowmeter By-pass	No	See Low Gloss Appendix V.G.34
	B-Train Devo 1 Recycle		Control Class Amoundiv V C 24
Low Gloss ABS Unit	Out Control Valve Inlet	No	See Low Gloss Appendix V.G.34

	B-Train Devo 1 Recycle		See Low Gloss Appendix V.G.34
ow Gloss ABS Unit	Out Control Valve Drain	No	See LOW Gloss Appendix Views
	n # . Day 1 Decycle		
ADC Unit	B-Train Devo 1 Recycle Out Control Valve	No	See Low Gloss Appendix V.G.34
Low Gloss ABS Unit	Out contact valve		
	B-Train Devo 1 Recycle		W 14 G 24
Low Gloss ABS Unit	Out Control Valve By-pass	No	See Low Gloss Appendix V.G.34
	B-Train Devo 1 Recycle		
Low Gloss ABS Unit	Out Line Drain On By-pass	No	See Low Gloss Appendix V.G.34
LOW GIOSS ABS OTH	inic		
	B-Train Devo 2 Recycle		
Low Gloss ABS Unit	Out P-5001C PI Isolation	No	See Low Gloss Appendix V.G.34
	B-Train Devo 2 Recycle		See Low Gloss Appendix V.G.34
Low Gloss ABS Unit	Out P-S001A PI Drain	No	See Low Gloss Appellant Water
	B-Train Devo 2 Recycle Out P-5001A Discharge	No	See Low Gloss Appendix V.G.34
Low Gloss ABS Unit	Out F-3001A Discharge		
	B-Train Devo 2 Recycle		
Low Gloss ABS Unit	Out P-5001B PI Isolation	No	See Low Gloss Appendix V.G.34
	B-Train Devo 2 Recycle		See Low Gloss Appendix V.G.34
Low Gloss ABS Unit	Out P-5001B PI Drain	No	See LOW Gloss Appendix 5.555
48541	B-Train Devo 2 Recycle Out P-5001B Discharge	No	See Low Gloss Appendix V.G.34
Low Gloss ABS Unit			
	B-Train Devo 2 Recycle Out Drain Above P-		
Low Gloss ABS Unit	5001A/B	No	See Low Gloss Appendix V.G.34
	B-Train Devo 2 Recycle		Control Class Assessment V.C. 24
Low Gloss ABS Unit	Out Sampler Inlet	No	See Low Gloss Appendix V.G.34

	B-Train Devo 2 Recycle		
ow Gloss ABS Unit	Out Sampler Outlet	No	See Low Gloss Appendix V.G.34
	B-Train Devo 2 Recycle		
Low Gloss ABS Unit	Out Sampler By-pass	No	See Low Gloss Appendix V.G.34
	B-Train Devo 2 Recycle		
Low Gloss ABS Unit	OutSampler	No	See Low Gloss Appendix V.G.34
	B-Train Devo 2 Recycle		11.140.22
Low Gloss ABS Unit	Out Filter Inlet	No	See Low Gloss Appendix V.G.34
	B-Train Devo 2 Recycle		
Low Gloss ABS Unit	Out Filter Inlet Drain	No	See Low Gloss Appendix V.G.34
	B-Train Devo 2 Recycle		
Low Gloss ABS Unit	Out Filter Outlet Drain	No	See Low Gloss Appendix V.G.34
	B-Train Devo 2 Recycle		Control Chan Amondia V. G. 24
Low Gloss ABS Unit	Out Filter Outlet	No	See Low Gloss Appendix V.G.34
	B-Train Devo 2 Recycle		See Low Gloss Appendix V.G.34
Low Gloss ABS Unit	Out Filter By-pass	No	JEE LOW GIOSS APPENDIX 1.0.57
	B-Train Devo 2 Recycle	N.a.	See Low Gloss Appendix V.G.34
Low Gloss ABS Unit	Out Isolation to PI	No	300 2011 01030 / App 01030 /
	B-Train Devo 2 Recycle	No	See Low Gloss Appendix V.G.34
Low Gloss ABS Unit	Out Drain to Pl	No	

	B-Train Devo 2 Recycle			
ow Gloss ABS Unit	Out Flowmeter Inlet	No	See Low Gloss Appendix V.G.34	
ow Gloss ABS Unit	B-Train Devo 2 Recycle Out Flowmeter Drain	No	See Low Gloss Appendix V.G.34	
ow Gloss ABS Unit	B-Train Devo 2 Recycle Out Flowmeter Outlet	No	See Low Gloss Appendix V.G.34	
ow Gloss ABS Unit	B-Train Devo 2 Recycle Out Flowmeter By-pass	No	See Low Gloss Appendix V.G.34	
ow Gloss ABS Unit	B-Train Devo 2 Recycle Out Control Valve Inlet	No	See Low Gloss Appendix V.G.34	
ow Gloss ABS Unit	B-Train Devo 2 Recycle Out Control Valve Drain	No	See Low Gloss Appendix V.G.34	
ow Gloss ABS Unit	B-Train Devo 2 Recycle Out Control Valve	No	See Low Gloss Appendix V.G.34	
Low Gloss ABS Unit	B-Train Devo 2 Recycle Out Control Valve By-pas	s No	See Low Gloss Appendix V.G.34	

/.G.32	Replacing or Repacking Existing Valves that Have Screening Values at or above 250 ppm with Low E Valves or Low E Packing.
/,G.32.a	a. Existing Valves Required to Be Replaced or Repacked. Except as provided in Paragraph 34, for each Existing Valve that has a Screening Value at or above 250 ppm during any monitoring event, Dow shall either replace or repack the Existing Valve with a Low E Valve or Low E Packing.
/.G.32.b	b. Timing: If Replacing or Repacking Does Not Require a Process Unit Shutdown. If replacing or repacking does not require a process unit shutdown, Dow shall replace or repack the Existing b. Timing: If Replacing or Repacking Does Not Require a Process Unit Shutdown. If replacing or repacking does not require a process unit shutdown, Dow shall replace or repack the Existing b. Timing: If Replacing or Repacking Does Not Require a Process Unit Shutdown. If replacing or repacking does not require a process unit shutdown, Dow shall replace or repack the Existing b. Timing: If Replacing or Repacking Does Not Require a Process Unit Shutdown. If replacing or repacking does not require a process unit shutdown, Dow shall replace or repack the Existing b. Timing: If Replacing or Repacking Does Not Require a Process Unit Shutdown. If replacing or repacking does not require a process unit shutdown, Dow shall replace or repack the Existing b. Timing: If Replacing or Repacking Does Not Require a Process Unit Shutdown. If replacing or repacking does not require a process unit shutdown, Dow shall replace or repack the Existing b. Timing: If Replacing or Repacking Does Not Require a Process Unit Shutdown. If replacing or repacking does not require a process unit shutdown. If replacing or repacking does not require a process unit shutdown. If replacing or repacking does not require a process unit shutdown. If replacing or repacking does not require a process unit shutdown. If replacing or repacking does not require a process unit shutdown. If replacing or repacking does not require a process unit shutdown. If replacing or repacking does not require a process unit shutdown. If replacing or repacking does not require a process unit shutdown. If replacing or repacking does not require a process unit shutdown. If replacing does not require a process unit shutdown. If replacing does not require a process unit shutdown. If replacing does not require a process unit shutdown. If replacing does not require a process unit shutdown. If repl
V.G.32.b.i	Prior to the deadline, Dow must take all actions necessary to obtain the required valve or valve packing, including all necessary associated materials, as expeditiously as practical, and retain documentation of the actions taken and the date of each such action;
V.G.32.b.ii	If, despite Dow's efforts to comply with Subparagraph 32.b.i, the required valve or valve packing, including all necessary associated materials, is not available in time to complete the installation within one month, Dow must take all reasonable actions to minimize emissions from the valve pending completion of the required replacing or repacking. Examples include: installation within one month, Dow must take all reasonable actions to minimize emissions from the valve pending completion of the required replacing or repacking of a valve with a valve that is not a Low-E Valve or with packing that is not Low-E Packing; and
V.G.32.b.iii	Dow must promptly perform the required replacing or repacking after Dow's receipt of the valve or valve packing, including all necessary associated materials.
V.G.32.c	c. Timing: If Replacing or Repacking Requires a Process Unit Shutdown. If replacing or repacking requires a process unit shutdown, Dow shall replace or repack the Existing Valve during the first Maintenance Shutdown that follows the monitoring event that triggers the requirement to replace or repack the valve, unless Dow documents that insufficient time existed between the first Maintenance Shutdown that follows the monitoring event that triggers the requirement to replace or repack the valve, unless Dow documents that insufficient time existed between the first Maintenance Shutdown that follows the monitoring event and that Maintenance Shutdown to enable Dow to purchase and install the required valve or valve packing technology. In that case, Dow shall undertake the replacing or repacking at the next Maintenance Shutdown that occurs after Dow's receipt of the valve or valve packing, including all necessary associated materials.
V.G.32.d	d. Actions Required Pending Replacing or Repacking Pursuant to Subparagraphs 32.a - c.
V,G.32.d.i	i. Actions Required Pursuant to Subsection E. Dow shall not be required to comply with Subsection E pending replacing or repacking pursuant to Subsection E. Dow shall not be required to comply with Subsection E pending replacing or repacking within one month, or if, at the time of the leak replacing or repacking by the date that is no later than one month after detecting the leak. If Dow does not complete the replacing or repacking within one month, Dow shall comply with all applicable requirements of Subsection I detection, Dow reasonably can anticipate that it might not be able to complete the replacing or repacking within one month, Dow shall comply with all applicable requirements of Subsection I
V.G.32.d.ii	ii. Actions Required Pursuant to Applicable Regulations. For each Existing Valve that has a Screening Value at or above 500 ppm, Dow shall comply with all applicable regulatory requirements, including repair and "delay of repair," pending replacing or repacking pursuant to Subparagraphs 32.a c.

Covered Process Unit	Valve Tag #	Screening Value (ppm) and Initial Monitoring Date	Type of Action Taken	Why	Schedule for Known Replacement, Repackings, Improvements, or Eliminations
Low Gloss ABS Unit	15597	406 5/24/2013	11/13/2013 Replaced valve.	Replace/Repack did not occur within one month of the initial leak date due to valve/valve packing and associated materials not available. Equipment was ordered in a timely manner, but manufacturer documented 14 week lead time for receipt of equipment. Replacement occurred once equipment was received.	Not applicable
Low Gloss ABS Unit	97682	350 5/24/2013	12/4/2013 Replaced valve.	Replace/Repack did not occur within one month of the initial leak date due to valve/valve packing and associated materials not available. Equipment was ordered in a timely manner but manufacturer documented 20 week lead time for receipt of equipment. Replacement occurred once equipment was received.	Not applicable

Low Gloss ABS Unit	17270	6/25/2012	Required: Valve was removed from service on 4/2/2014 during the first Maintenance Shutdown after the monitoring event.		Not applicable Not applicable
Low Gloss ABS Unit	18822	278 11/13/2012	Maintenance Shutdown Required: Valve was replaced on 4/2/2014 during the first Maintenance Shutdown after the monitoring event.	Not applicable	пот арриса ше
Low Gloss ABS Unit	17661	267 11/15/2012	Maintenance Shutdown Required: Valve was replaced on 3/31/2014 during the first Maintenance Shutdown after the monitoring event.	Not applicable	Not applicable
Low Gloss ABS Unit	17662	1033 11/15/2012	Maintenance Shutdown Required: Valve was replaced on 3/31/2014 during the first Maintenance Shutdown after the monitoring event.	Not applicable	Not applicable
Low Gloss ABS Unit	17431	846 2/19/2013	Maintenance Shutdown Required: Valve was removed from service on 4/2/2014 during the first Maintenance Shutdown after the monitoring event.	Not applicable	Not applicable

Low Gloss ABS Unit	18711	357 2/22/2013	Maintenance Shutdown Required: Valve was replaced on 4/2/2014 during the first Maintenance Shutdown after the monitoring event.	Not applicable	Not applicable
Low Gloss ABS Unit	17452	929 2/26/2013	Maintenance Shutdown Required: Valve was replaced on 4/2/2014 during the first Maintenance Shutdown after the monitoring event.	Not applicable	Not applicable
Low Gloss ABS Unit	102286	327 2/26/2013	Maintenance Shutdown Required: Valve was replaced on 4/2/2014 during the first Maintenance Shutdown after the monitoring event.	Not applicable	Not applicable
Low Gloss ABS Unit	17466	297 2/26/2013	Maintenance Shutdown Required: Valve was removed from service on 4/2/2014 during the first Maintenance Shutdown after the monitoring event.	Not applicable	Not applicable
Low Glass ABS Unit	16396	150 2/28/2013	Maintenance Shutdown Required: Valve was removed from service on 4/2/2014 during the first Maintenance Shutdown after the monitoring event.	Not applicable	Not applicable

Low Gloss ABS Unit		635 3/1/2013 960 5/7/2013	Maintenance Shutdown Required: Valve was replaced on 4/3/2014 during the first Maintenance Shutdown after the monitoring event.	Not applicable	Not applicable
Low Gloss ABS Unit	17433	428 5/20/2013		Not applicable	Not applicable
Low Gloss ABS Unit	17467	1930 5/20/2013		Not applicable	Not applicable
Low Gloss ABS Unit	106545	498 5/24/2013	Maintenance Shutdown Required: Valve was repacked on 3/31/2014 during the first Maintenance Shutdown after the monitoring event.	Not applicable	Not applicable
Low Gloss ABS Unit	17605	1160 5/29/2013	Maintenance Shutdown Required: Valve was replaced on 3/24/2014 during the first Maintenance Shutdown after the monitoring event.	Not applicable	Not applicable

Low Gloss ABS Unit	17294	1251		Not applicable	Not applicable
FOM CIDES VED CITY		5/29/2013	Required: Valve was replaced		
		-,,	on 3/31/2014 during the first		
			Maintenance Shutdown after	!	
	İ	ļ	the monitoring event.		
		1			
			0/44/12	Not applicable	Not applicable
Low Gloss ABS Unit	17085	393		Not applicable	The approach
:		8/13/2013	Replaced valve.		
	Į		ļ		
		į.			
		W			
Low Gloss ABS Unit	17272	540	9/12/2013	Not applicable	Not applicable
2011 010001112		8/13/2013	Removed valve from service.		
Low Gloss ABS Unit	17284	703	Maintenance Shutdown	Not applicable	Not applicable
FOM GIOSS MDS OTHE	17204	8/14/2013	Required: Valve was replaced		
		1 , - 3 ,	on 3/31/2014 during the first		
			Maintenance Shutdown after		
			the monitoring event.		
]	
			11/13/2013	Replace/Repack did not	Not applicable
Low Gloss ABS Unit	16916	503		occur within one month of	1
		8/15/2013	Replaced valve.	the initial leak date. See	
				VI.53.b Attachment 1 for	
				details. Equipment was	
				ordered just prior to the	
				one month replacement	
<u> </u>				deadline. Upon ordering	
			i i		
				leguinment manufacturer	
				equipment, manufacturer	
			\$	documented 3-4 week lead	
				documented 3-4 week lead time for receipt of	
				documented 3-4 week lead	

	Low Gloss ABS Unit	72248	1597	9/13/2013	Not applicable	Not applicable
	COM GIOSS ABS OTHE	/2246	8/15/2013	Replaced valve.		
			0/13/2013	noplaced raites		
	L CL ADC H-it	97707	413	Maintenance Shutdown	Not applicable	Not applicable
	Low Gloss ABS Unit	97707		Required: Valve was replaced]	
			8/15/2013			
				on 4/3/2014 during the first		
				Maintenance Shutdown after		
				the monitoring event.		
	Low Gloss ABS Unit	16958	572	9/17/2013	Replace/Repack did not	Not applicable
	FOM GIOSS AR2 DUIL	10336	8/16/2013	Replaced valve.	occur within one month of	
		l-	8/10/2013	neplaced valve.	the initial leak date due to	
					valve/valve packing and	
					associated materials not	
					available. Equipment was	
					ordered in a timely manner,	
					but manufacturer	
					documented 10 week lead	
0.000					time for receipt of	
					equipment. Replacement	
				•	occurred once equipment	
					was received.	
						1
	Low Gloss ABS Unit	15762	254	8/27/2013	Not applicable	Not applicable
	2011 210337123 31111		8/19/2013	Replaced/repacked valve.		
			0, 13, 2010	, , , , , , , , , , , , , , , , , , , ,		
					N	Not applicable
	Low Gloss ABS Unit	66494	761	9/18/2013	Not applicable	Inot applicable
			8/19/2013	Replaced valve.		
		1				
]					

				1.10-10-10	N-+	Not applicable
	Low Gloss ABS Unit	102220	509	9/27/2013	Not applicable	пос аррисавіе
			8/29/2013	Replaced valve.		
1 to Viscous Viscous Visit	1				<u> </u>	

	D 45511-3	Jazoa	2244	2/12/2014	Replace/Repack did not	Not applicable
	Low Gloss ABS Unit				occur within one month of	in a min him man
			11/12/2013	· · - p · ·	the initial leak date due to	
					valve/valve packing and	
					associated materials not	
					available. Equipment was	
]				ordered in a timely manner,	
					but manufacturer	
	,				documented 14 week lead	
	}				time for receipt of	
					equipment. Replacement	
					occurred once equipment	:
					was received.	
						}
	:					
				2/25/2044	Replace/Repack did not	Not applicable
	Low Gloss ABS Unit	l .	l .	2/25/2014	occur within one month of	Ivot applicable
			11/12/2013	Replaced valve.		
					the initial leak date due to	
					valve/valve packing and	
					associated materials not	
					available. Equipment was	
					ordered in a timely manner,	
					but manufacturer	
					documented 14 week lead	
					time for receipt of	
					equipment. Replacement	
					occurred once equipment	
					was received.	
	Low Gloss ABS Unit	17885		Maintenance Shutdown	Not applicable	Not applicable
				Required: Valve was replaced		
金銭速度時				on 3/31/2014 during the first		
	į.			Maintenance Shutdown after		
	:			the monitoring event.		
	:[

andin∎en∎ensisi Hatanahan	Low Gloss ABS Unit	16977	753	4/2/2014	Replace/Repack did not	Not applicable
			11/20/2013	Replaced valve.	occur within one month of	
					the initial leak date due to	
					valve/valve packing and	
					associated materials not	
					available. Equipment was	
					ordered in a timely manner,	
					but manufacturer	
				1	documented 12-14 week	
			·		lead time for receipt of	
					equipment. Replacement	
					occurred once equipment	
					was received.	
			- Constitution of the Cons			
	Low Gloss ABS Unit	103231	340	2/26/2014	Not applicable	Not applicable
			2/4/2014	Replaced valve.		
	Low Gloss ABS Unit	103233	626	1 * *	Not applicable	Not applicable
			2/4/2014	Replaced valve.		
	Low Gloss ABS Unit	108959	945		Not applicable	Not applicable
			2/6/2014	Repacked valve.		
	Low Gloss ABS Unit	15903	303	3/4/2014	Not applicable	Not applicable
			2/17/2014	Replaced valve.	LAVA PARAMETER AND A STATE OF THE STATE OF T	
	Low Gloss ABS Unit	17483	6071	Maintenance Shutdown	Not applicable	Not applicable
			3/11/2014	Required: Valve was removed		
				from service on 4/2/2014	news	
				during the first Maintenance		
				Shutdown after the	11.00	
				monitoring event.		
					1	
					D 1 /D 1	A - 41 201 2
	Low Gloss ABS Unit	17672	1315	Replace/Repack scheduled to	1	April 2017
			4/5/2014	occur outside of the current	Maintenance Shutdown	
				reporting period (7/1/2013-		
				6/30/2014).		
Institution of the					L	·

5 4 4 Car at 10 10 10 10 10 10 10 10 10 10 10 10 10	Low Gloss ABS Unit	16950	481	Replace/Repack scheduled to	Replace/Repack requires	April 2017
	FOM GIO33 MID OTHE	10330	5/8/2014	occur outside of the current	Maintenance Shutdown	
				reporting period (7/1/2013-		
				6/30/2014).		
	Low Gloss ABS Unit	37534	5680	5/9/2014	Not applicable	Not applicable
	LOW Gloss Abs Unit	37334	5/8/2014	Replaced valve.		
	Low Gloss ABS Unit	15923	593	7/2/2014	Replace/Repack did not	Not applicable
	EOW GIOSS ABS OTHE	13323	5/14/2014	Replaced valve.	occur within one month of	
			[-, - ·,·		the initial leak date. See	
					VI.53.b Attachment 1 for	
					details.	
						and the second s
V.G.33	제 요리 유가를 하는 사람들이 모든 중에게 되었다.	Low-E Valves and Low-E				270 41 1/2/2
	a. "Low E" Status Not Aff not a violation of this De technology of the same t	fected by Subsequent Leal cree, does not invalidate t type.	ks. If, during monitoring after ins the "Low E" status or use of that	type of valve or packing technology, a	and does not require replacin	g other, non-leaking valves or packing
	a. "Low E" Status Not Aff not a violation of this De technology of the same to b. Repairing Low E Valve shall apply.	fected by Subsequent Leal cree, does not invalidate t type: s. If, during monitoring af	ks.: If, during monitoring after ins the "Low E" status or use of that fter installation, a Low-E Valve or	type of valve or packing technology, a a valve using Low-E Packing has a Scr	and does not require replacing tening Value at or above 250	ppm, Paragraphs 21, 22, 24, 25, 26 and 27
V.G.33.a V.G.33.b	a. "Low E" Status Not Aff not a violation of this De technology of the same t b. Repairing Low E Valve shall apply.	fected by Subsequent Leal cree, does not invalidate t type s. If, during monitoring af g Low E Valves. On any oc ce or repack it. On any oc	ks. If, during monitoring after ins the "Low E" status or use of that iter installation, a Low-E Valve or	type of valve or packing technology, a a valve using Low-E Packing has a Scr valve that utilizes Low-E Packing has a valve that utilizes Low E Packing has a	and does not require replacing value at or above 250 a Screening Value at or above 5 Screening Value at or above 5	g other, non-leaking valves or packing
V.G.33.a V.G.33.b V.G.33.c	a. "Low E" Status Not Aff not a violation of this De technology of the same to b. Repairing Low E Valve shall apply. c. Replacing or Repacking not be required to replace.	fected by Subsequent Leal cree, does not invalidate t type s. If, during monitoring af g Low E Valves. On any oc ce or repack it. On any oc	ks. If, during monitoring after ins the "Low E" status or use of that iter installation, a Low-E Valve or	type of valve or packing technology, a a valve using Low-E Packing has a Scr	and does not require replacing value at or above 250 a Screening Value at or above 5 Screening Value at or above 5	ppm, Paragraphs 21, 22, 24, 25, 26 and 27 250 ppm but below 500 ppm, Dow shall 500 ppm, Dow shall replace or repack it

V.G.34	34. Commercial Unavailability of a Low-E Valve or Low-E Packing. Dow shall not be required to utilize a Low-E Valve or Low-E Packing to replace or repack a valve if a Low-E Valve or Low-E Packing is commercially unavailable. The factors relevant to the question of commercial unavailability and the procedures that Dow must follow to assert that a Low-E Valve or Low-E Packing is commercially unavailable are set forth in Appendix A.	See Low Gloss Appendix V.G.34
V.G.35	35. Records of Low-E Valves and Low-E Packing. Prior to installing any Low-E Valves or Low-E Packing, or if not possible before installation, then as soon as possible after installation, Dow shall secure from each manufacturer documentation that demonstrates that the proposed valve or packing technology meets the definition of "Low-E Valve" and/or "Low-E Packing." Dow shall make the documentation available upon request.	See Low Gloss Appendix V.G.35
V.G.36	36. Connector Replacement and Improvement Descriptions.	
V.G.36.a	a. For purposes of Paragraphs 37 - 38, for each of the following types of connectors, the following type of replacement or improvement shall apply:	
	Connector Type - Replacement or Improvement Description	
	Flanged - Gasket replacement or gasket improvement	
	Threaded - Replacement of the connector with a like kind connector or other	
	Compression - Replacement of the connector with a like kind connector or other	
	Cam Lock - Replacement or improvement of the gasket or replacement or improvement of the Cam Lock	
	Quick Connect - Replacement or improvement of the gasket if applicable, or replacement of the connector (with either a like kind connector or other) if there is no gasket
	Any type (including any of the above) - Elimination (e.g., through welding, pipe replacement, etc.)	
V.G.36.b	b. In cases where replacement in kind is utilized as the method for replacing or improving a connector (e.g., a Quick Connect replaces another Quick 36.b.i and 36.b.ii shall apply.	
V.G.36.b.i	i. If there are types, models or styles of a like-kind connector that are less likely to leak than the existing connector, and one or more of those types, ruse (considering the service, operating conditions, and type of piping or tubing that the connector is in) and would not create a major safety, mechanissue, Dow shall select a like-kind connector from among such types, models or styles.	nodels or styles are technically feasible to lical, product quality, regulatory or other
V.G.36.b.ii	ii. If Subparagraph 36.b.i does not apply, Dow may install a like-kind connector that is the same type, model or style as the existing connector.	
V.G.37	37. Installing New Connectors. For each Covered Process Unit, Dow shall use best efforts, when selecting a new connector that, when installed, will to connector that is least likely to leak, using good engineering judgment, for the service, operating conditions, and type of piping or tubing that the connector that is least likely to leak, using good engineering judgment, for the service, operating conditions, and type of piping or tubing that the connector that is least likely to leak, using good engineering judgment, for the service, operating conditions, and type of piping or tubing that the connector that is least likely to leak, using good engineering judgment, for the service, operating conditions, and type of piping or tubing that the connector that is least likely to leak, using good engineering judgment, for the service, operating conditions, and type of piping or tubing that the connector that is least likely to leak, using good engineering judgment, for the service, operating conditions, and type of piping or tubing that the connector that is least likely to leak, using good engineering judgment, for the service, operating conditions, and type of piping or tubing that the connector that is least likely to leak, using good engineering judgment, for the service, operating conditions, and type of piping or tubing that the connector that is least likely to leak, using good engineering judgment, for the service, operating conditions, and type of piping or tubing that the connector that is least likely to leak, using good engineering judgment, for the service, operating conditions, and type of piping or tubing the connector that is least likely to leak, using good engineering judgment, for the service, operating the connector that it is least likely to leak the connector that it is least likely to leak the connector that it is least likely to leak the connector that it is least likely to leak the connector that it is least likely to leak the connector that it is least likely to leak the connector that it is	Mector is in. This requirement applies to

A Committee Committee	Covered Process Unit	New Connector Tag # or Description		Connector Selected That is Least Likely To Leak (Yes or No)	If Low Gloss ABS piping specifications were not followed to select connecto type, explain why
	Low Gloss ABS Unit	109284	Flanged - Gasket	Yes	Not applicable
	Low Gloss ABS Unit	66543.3	Threaded	Yes	Not applicable
計成 研究	Low Gloss ABS Unit	18843.1	Threaded	Yes	Not applicable
	Low Gloss ABS Unit	18852.7	Threaded	Yes	Not applicable
	Low Gloss ABS Unit	15444.1	Threaded	Yes	Not applicable
	Low Gloss ABS Unit	18627.3	Threaded	Yes	Not applicable
	Low Gloss ABS Unit	18627.4	Threaded	Yes	Not applicable
	Low Gloss ABS Unit	66996.3	Flanged - Gasket	Yes	Not applicable
	Low Gloss ABS Unit	71923.3	Flanged - Gasket	Yes	Not applicable
	Low Gloss ABS Unit	71921.3	Flanged - Gasket	Yes	Not applicable
	Low Gloss ABS Unit	18668.3	Flanged - Gasket	Yes	Not applicable
	Low Gloss ABS Unit	18673.3	Flanged - Gasket	Yes	Not applicable
	Low Gloss ABS Unit	18678.3	Flanged - Gasket	Yes	Not applicable
	Low Gloss ABS Unit	18669.4	Threaded	Yes	Not applicable
	Low Gloss ABS Unit	18684.3	Flanged - Gasket	Yes	Not applicable
	Low Gloss ABS Unit	108955.4	Threaded	Yes	Not applicable
	Low Gloss ABS Unit	98134.3	Flanged - Gasket	Yes	Not applicable
	Low Gloss ABS Unit	98131.3	Flanged - Gasket	Yes	Not applicable
E	Low Gloss ABS Unit	18398.9	Threaded	Yes	Not applicable
	Low Gloss ABS Unit	108951.2	Threaded	Yes	Not applicable
	Low Gloss ABS Unit	108953.1	Flanged - Gasket	Yes	Not applicable
	Low Gloss ABS Unit	81173.1	Threaded	Yes	Not applicable
	Low Gloss ABS Unit	81173.2	Threaded	Yes	Not applicable
	Low Gloss ABS Unit	81173.5	Flanged - Gasket	Yes	Not applicable
	Low Gloss ABS Unit	17947.2	Threaded	Yes	Not applicable
	Low Gloss ABS Unit	18003.2	Threaded	Yes	Not applicable

Low Gloss ABS Unit	18004.2	Threaded	Yes	Not applicable	
Low Gloss ABS Unit	109303	Check valve connection	Yes	Not applicable	
Low Gloss ABS Unit	109303.2	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	109304.2	Flanged - Gasket	Yes	Not applicable	1
Low Gloss ABS Unit	109305	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	109307.1	Flanged - Gasket	Yes	Not applicable	2
Low Gloss ABS Unit	109307.2	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	109308.1	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	109308.2	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	109308.3	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	109309.1	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	109309.2	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	109310	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	109311	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	109312	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	109304.1	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	109304.3	Threaded	Yes	Not applicable	
Low Gloss ABS Unit	109307.3	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	109306.1	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	109306.2	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	153700.1	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	153700.2	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	153700.3	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	153700.4	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	153701.1	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	153701.2	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	153701.3	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	153701.4	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	153703.1	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	153703.2	Flanged - Gasket	Yes	Not applicable	

Low Gloss ABS Unit	153703.3	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	153705	Check valve connection	Yes	Not applicable	
ow Gloss ABS Unit	153705.1	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	153705.2	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	150022	Check valve connection	Yes	Not applicable	
ow Gloss ABS Unit	150022.1	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	150022.2	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	153702.1	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	153702.2	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	153702.3	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	153702.4	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	153709.1	Flanged - Gasket	Yes	Not applicable	***
ow Gloss ABS Unit	153709.2	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	153709.3	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	102220.4	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	17295.2	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	17295.21	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	18174.6	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	18174.7	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	41772.1	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	41772.2	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	109362.1	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	109362.2	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	109361.1	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	109361.2	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	105465	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	105465.1	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	105466	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	109889.1	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	109889.3	Threaded	Yes	Not applicable	

ow Gloss ABS Unit	109889.4	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	109889.5	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	109889.6	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	109889.7	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	109889.8	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	109889.9	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	154618.1	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	154618.2	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	106559.1	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	106559.2	Threaded	Yes	Not applicable	:
ow Gloss ABS Unit	154616.2	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	154616.3	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	154616.4	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	153781.4	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	153781.5	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	153781.6	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	153781.7	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	153781.8	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	153781.9	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	153781.1	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	153781.11	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	153781.12	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	154430.4	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	154574	Check valve connection	Yes	Not applicable	
ow Gloss ABS Unit	154570.3	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	154570.4	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	154572	Check valve connection	Yes	Not applicable	
ow Gloss ABS Unit	154575.1	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	154575.3	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	154575.4	Threaded	Yes	Not applicable	

ow Gloss ABS Unit	154595.4	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	154597	Check valve connection	Yes	Not applicable	
Low Gloss ABS Unit	154601	Check valve connection	Yes	Not applicable	
Low Gloss ABS Unit	154603.4	Threaded	Yes	Not applicable	
Low Gloss ABS Unit	154608.4	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	150201.1	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	150201.2	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	150202.1	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	18412.1	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	108603.2	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	16980	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	90196.1	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	3601.6	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	90195.1	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	97963	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	18402.6	Threaded	Yes	Not applicable	
ow Gloss ABS Unit	37568	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	37581.1	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	37581.2	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	37593.2	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	90195.1	Flanged - Gasket	Yes	Not applicable	
ow Gloss ABS Unit	97302	Flanged - Gasket	Yes	Not applicable	
Low Gloss ABS Unit	97963	Flanged - Gasket	Yes	Not applicable	

V.G.38	38. Replacing or Improvin	g Connectors.							
V.G.38.a	a. Trigger for Replacement or Improvement Requirements. For each connector that, in any two of three consecutive monitoring periods, has a Screening Value at or above 250 ppm, Dow shall replace or improve the connector in accordance with the applicable replacement or improvement described in Paragraph 36. Dow shall use best efforts to install a replacement or improvement that will be the least likely to leak, using good engineering judgment, for the service, operating conditions, and type of piping or tubing that the connector is in.								
V.G.38.b	monitoring event that trip improvement during the insufficient time existed t	ggers the replacement or first Maintenance Shutdo between the monitoring e	es not require a process unit shutdown improvement requirement. If the reployn that follows the monitoring event event and the Maintenance Shutdown that occurrence with the maintenance Shutdown that occurred the maintenance Shutdown that occurred the maintenance Shutdown that occurred the maintenance Shutdown that occurred the maintenance Shutdown that occurred the maintenance Shutdown that occurred the maintenance Shutdown that occurred the maintenance Shutdown that occurred the maintenance shutdown that occurred the maintenance shutdown that occurred the maintenance shutdown that occurred the maintenance shutdown that occurred the maintenance shutdown that occurred the maintenance shutdown the maintenance shutdown that occurred the maintenance shutdown the maintenance shutdown that occurred the maintenance shutdown the maintenance shutdown that occurred the maintenance shutdown the maintenance shutdown that occurred the maintenance shutdown the maintenanc	lacement or improvement requi that triggers the requirement to to enable Dow to secure and inc	res a process unit shutdown, replace or improve the conn stall the replacement or impro	Dow shall undertake the replacement or ector, unless Dow documents that			
V.G.38.c	c. Actions Required Pendi	ing Replacements or Impr	rovements Pursuant to Subparagraphs	38.a b.					
V.G.38.c.i	i. Actions Required Pursu completes the replaceme month, or if, at the time of all applicable requiremen	ant to Subsection E. Dow int or improvement by the of the leak detection, Dow ts of Subsection E.	shall not be required to comply with S e date that is no later than one month v reasonably can anticipate that it migl	Subsection E pending replaceme after detecting the leak. If Dow nt not be able to complete the r	does not complete the repla eplacement or improvement	cement or improvement within one within one within one month, Dow shall comply with			
V.G.38.c.ii	ii. Actions Required Pursu including repair and "dela	ant to Applicable Regulat by of repair," pending rep	tions. For each connector that has a So lacement or improvement pursuant to	reening Value at or above 500 p Subparagraphs 38.a b.	opm, Dow shall comply with a	Il applicable regulatory requirements,			
Data V.G.38	Covered Process Unit	Connector Tag #	Monitoring Dates and Screening Values (ppm) That Trigger Replacement or Improvement	Date Action Was Taken and Type of Action Taken	Any Actions Not Taken and Why	Schedule for Known Replacements, Improvements, or Eliminations			
	Low Gloss ABS Unit	18412.1	8/9/2012 - 1631 ppm 8/19/2013 - 1445 ppm	Maintenance Shutdown Required: Replaced with like kind threaded connector on 3/31/2014 during the first maintenance shutdown after discovering this connector triggered replacement or improvement.	Not Applicable	Not Applicable			
	Low Gloss ABS Unit	108603.2	10/25/2012 - 322 ppm 5/14/2013 - 881 ppm	Maintenance Shutdown Required: Replaced flanged connector gasket on 4/5/2014 during the first maintenance shutdown after discovering this connector triggered replacement or improvement		Not Applicable			

	Low Gloss ABS Unit	16980	8/15/2013 -430 ppm	-, -,	Not applicable	Not applicable
			5/9/2014 - 459 ppm	Replaced flanged connector		
				gasket		
	Low Gloss ABS Unit	90196.1	5/14/2013 - 335 ppm	6/4/2014	Not applicable	Not applicable
			5/21/2014 - 539 ppm	Replaced flanged connector		
	252 250			gasket		
	Low Gloss ABS Unit	3601.6	5/13/2013 - 340 ppm	6/4/2014	Not applicable	Not applicable
			5/27/2014 - 314 ppm	Replaced with like kind		
	56 20			threaded connector elbow		
	Low Gloss ABS Unit	90195.1	5/14/2013 - 619 ppm	6/4/2014	Not applicable	Not applicable
			5/27/2014 - 496 ppm	Replaced flanged connector gasket		
	Low Gloss ABS Unit	107445.4	5/16/2013 - 339 ppm	6/26/2014	Not applicable	Not applicable
			5/28/2014 - 429 ppm	Improved threaded connector		
				with Teadit ECOTAPE		
	Low Gloss ABS Unit	97963	11/21/2013 - 552 ppm	6/4/2014	Not applicable	Not applicable
			5/28/2014 - 1319 ppm	Replaced flanged connector		
				gasket		
39	39. Nothing in Paragrap	hs 30 - 38 requires Dow	to utilize any valve, valve packing tec	chnology, or connector that is not ap	propriate for its intende	d use in a Covered Process Unit.
40	In each Compliance Stat	us Report due under Se	ction VI (Reporting Requirements) of	this Decree, Dow shall include a sep	arate section in the Rep	ort that: (i) describes the actions it took to
	comply with this Subsec	tion G, including identif	ying each piece of equipment that tr	iggered a requirement in Subsection	G, the Screening Value f	or that piece of equipment, the type of action
	taken (i.e., replacement	, repacking, or improver	nent), and the date when the action	was taken; (ii) identifies any required	actions that were not t	aken and explains why; and (iii) identifies the
	schedule for any known	, future replacements, r	epacking, improvements, or eliminat	ions.		

Ethocel ™ cellulose ethers Appendix V.G.34 Commercial Unavailability of a Low-E Valve or Low-E Packing

G.34 34. Commercial Unavailability of a Low-E Valve or Low-E Packing. Dow shall not be required to utilize a Low-E Valve or Low-E Packing to replace or repack a valve if a Low-E Valve or Low-E Packing is commercially unavailable. The factors relevant to the question of commercial unavailability and the procedures that Dow must follow to assert that a Low-E Valve or Low-E Packing is commercially unavailable are set forth in Appendix A.

Covered Process Unit	Valve Tag # and/or Description	Valve Type	Size	Manufacturer	Explanation for Commercial Unavailability
			ruseri. Parveri A ERRO ERRO		Five rings of low E packing will
					not fit in this valve. See Appendix: Commercial
Ethocel ™ cellulose ethers	77850	Ball	3/4"	Jamesbury	Unavailability
ethoder dendiose ethero	,,,,,,,				Five rings of low E packing will
					not fit in this valve. See
	DO-416A/ TRUCK				Appendix: Commercial
Ethocel ™ cellulose ethers	SPOT VENT VALVE	 Ball	2"	Jamesbury	Unavailability
					Five rings of low E packing will
					not fit in this valve. See
					Appendix: Commercial
Ethocel ™ cellulose ethers	101411	Ball	3/4"	Jamesbury	Unavailability
					Five rings of low E packing will
					not fit in this valve. See
					Appendix: Commercial
Ethocel ™ cellulose ethers	107130	Threaded Ball	3/4"	Jamesbury	Unavailability

Ethocel ™ cellulose ethers Appendix V.G.34 Commercial Unavailability of a Low-E Valve or Low-E Packing

E Packing					Five rings of low E packing will
					not fit in this valve. See
発送 (数)					Appendix: Commercial
Ethocel ™ cellulose ethers	106229	Ball	1/2"	Jamesbury	Unavailability
					Five rings of low E packing wil
					not fit in this valve. Only full
					port split body Velan valves ar
					commercially available. See
					Appendix: Commercial
Ethocel ™ cellulose ethers	101354	Threaded Ball	3/4"	Velan	Unavailability
					Five rings of low E packing will
					not fit in this valve. See
사항 사항					Appendix: Commercial
Ethocel ™ cellulose ethers	100402	Ball	4"	ВАС	Unavailability
					Five rings of low E packing will
왕화 강화					not fit in this valve. See
30년 33일	Reactor 2				Appendix: Commercial
Ethocel ™ cellulose ethers	Strahman Valve	Drain	1 1/2"	Strahman	Unavailability
					Five rings of low E packing will
					not fit in this valve. See
					Appendix: Commercial
Ethocel ™ cellulose ethers	99308	Ball	2"	Jamesbury	Unavailability
					Five rings of low E packing will
					not fit in this valve. See
42.) 42.)					Appendix: Commercial
Ethocel ™ cellulose ethers	85458	Ball	2"	Jamesbury	Unavailability

Ethocel ™ cellulose ethers Appendix V.G.34 Commercial Unavailability of a Low-E Valve or Low-E Packing

:					Five rings of low E packing will
					not fit in this valve. See
(전) 					Appendix: Commercial
Ethocel ™ cellulose ethers	100777	Threaded Ball	3/4"	Jamesbury	Unavailability
					Five rings of low E packing will
					not fit in this valve. See
					Appendix: Commercial
Ethocel ™ cellulose ethers	100898	Ball	2"	Jamesbury	Unavailability
					Five rings of low E packing will
변 20 10					not fit in this valve. See
					Appendix: Commercial
Ethocel ™ cellulose ethers	100853	Threaded Ball	1/2"	Jamesbury	Unavailability
		*****	.,,		Changed valve from stainless
					steel to monel material of
盘					construction. See Appendix:
Ethocel ™ cellulose ethers	106344	Ball	2"	Jamesbury	Commercial Unavailability
					Changed valve from stainless
					steel to monel material of
20 22 32 53					construction. See Appendix:
Ethocel ™ cellulose ethers	106345	Ball	2"	Jamesbury	Commercial Unavailability
					Changed valve from stainless
601 62 64 64					steel to monel material of
					construction. See Appendix:
Ethocel ™ cellulose ethers	106347	Ball	2"	Jamesbury	Commercial Unavailability

Ethocel ™ cellulose ethers Appendix V.G.34 Commercial Unavailability of a Low-E Valve or Low-E Packing

					Changed from stainless
					monel material of
					construction. See Appe
Ethocel ™ cellulose ethers	106395	Ball	2"	Jamesbury	Commercial Unavailabil
					Changed valve from sta
			·		steel to monel material
					construction. See Appe
Ethocel ™ cellulose ethers	106366	Ball	2"	Jamesbury	Commercial Unavailabil
Cerrodel Germando da la la la la la la la la la la la la la					Changed valve from sta
					steel to monel material
					construction. See Appe
Ethocel ™ cellulose ethers	106392	Ball	3"	Jamesbury	Commercial Unavailabi
					Changed valve from sta
					steel to monel material
					construction. See Appe
Ethocel ™ cellulose ethers	106368	Ball	3"	Jamesbury	Commercial Unavailabi
Ethocal density and					Changed valve from sta
					steel to monel material
					construction. See Appe
Ethocel ™ cellulose ethers	106346	Ball	3"	Jamesbury	Commercial Unavailabi
					Changed valve from sta
					steel to monel material
					construction. See Appe
Ethocel ™ cellulose ethers	106371	Ball	3"	Jamesbury	Commercial Unavailabi

Ethocel ™ cellulose ethers Appendix V.G.34 Commercial Unavailability of a Low-E Valve or Low-E Packing

				Valve repacked with OEM
				packing. 5 rings of Low-E
				packing will not fit. See
				Appendix: Commercial
thers 108422	Ball	2"	Jamesbury	Unavailability
				Valve repacked with OEM
				packing. 5 rings of Low-E
				packing will not fit. See
				Appendix: Commercial
thers 100577	Ball	1"	Jamesbury	Unavailability
				O-rings are used to seal this
				valve rather than packing. Low
				emission technology is
				commercially unavailable for
thers 100952	Dome	10"	Roto Disc	this style valve.
				Valve repacked with OEM
				packing. 5 rings of Low-E
				packing will not fit. See
				Appendix: Commercial
thers 100401	Ball	4"	ВАС	Unavailability
				Valve repacked with original
				equipment manufacturer
				(OEM) packing. Five rings of
				Low-E packing will not fit. See
				Appendix: Commercial
thers 100402	Ball	4"	BAC	Unavailability
	thers 100577	thers 100577 Ball Thers 100952 Dome Thers 100401 Ball	thers 100577 Ball 1" There 100952 Dome 10" There 100401 Ball 4"	thers 100577 Ball 1" Jamesbury Chers 100952 Dome 10" Roto Disc Chers 100401 Ball 4" BAC

Ethocel [™] cellulose ethers Appendix V.G.34 Commercial Unavailability of a Low-E Valve or Low-E Packing

					Valve repacked with OEM
					packing. 5 rings of Low-E
					packing will not fit. See
					Appendix: Commercial
Ethocel ™ cellulose ethers	100377	Butterfly	8"	Jamesbury	Unavailability
					Valve repacked with OEM
					packing. 5 rings of Low-E
					packing will not fit. See
					Appendix: Commercial
Ethocel ™ cellulose ethers	100347	Ball	6"	BAC	Unavailability
					Valve repacked with OEM
					packing. 5 rings of Low-E
					packing will not fit. See
					Appendix: Commercial
Ethocel ™ cellulose ethers	108966	Butterfly	8"	Jamesbury	Unavailability
					Valve repacked with OEM
					packing. 5 rings of Low-E
					packing will not fit. See
					Appendix: Commercial
Ethocel ™ cellulose ethers	100327	Ball	6"	BAC	Unavailability
		**			Valve repacked with OEM
					packing. 5 rings of Low-E
					packing will not fit. See
					Appendix: Commercial
Ethocel ™ cellulose ethers	100309	Ball	4"	ВАС	Unavailability

Ethocel ™ cellulose ethers Appendix V.G.34 Commercial Unavailability of a Low-E Valve or Low-E Packing

. r acking		-			Five rings of low E packing will
					not fit in this valve. See
					Appendix: Commercial
			a 11	Masoneilan	Unavailability
Ethocel ™ cellulose ethers	100930	Control	1"	Masonellan	Five rings of low E packing will
					Inot fit in this valve. See
					Appendix: Commercial
	400050	D	1.5"	Strahman	Unavailability
Ethocel ™ cellulose ethers	100353	Drain	1.5	Straillian	
					This Velan 2" ball valve was
					classified as Low E and was
					installed on 5/15/2014 and
					6/26/2014. Valve leaked by
					internally to the process during
					both installations. Per email to
					EPA (sent 5/28/14 and
Year of the second seco					approved on 6/16/14), Dow
					reclassifed this valve as a non-
	DO 429A truck				Low E valve due to
Ethocel ™ cellulose ethers	vent valve	Full Port Ball	2"	Velan	performance issues.
					Non-Low E Jamesbury 2" ball
					valve was installed on
					5/16/2014 and 6/26/2014
	DO 429A truck				after both Velan full port ball
Ethocel ™ cellulose ethers	vent valve	Full Port Ball	2"	Jamesbury	valves failed (see above).

Appendix V.G.34 Commercial Unavailability of a Low-E Valve or

Low-E Packing

34. Commercial Unavailability of a Low-E Valve or Low-E Packing. Dow shall not be required to utilize a Low-E Valve or Low-E Packing to replace or repack a valve if a Low-E Valve or Low-E Packing is commercially unavailability and the procedures that Dow must follow to assert that a Low-E Valve or Low-E Packing is commercially unavailable are set forth in Appendix A.

Appendix A. Covered Process Unit	Valve Tag # and/or	Valve Type	Size	Manufacturer	Explanation for Commercial Unavailability
	Description				
	1226 V-105 2"				
	Jamesbury			į.	s a ti Communici
	BV(vb150cs111vnr				See Appendix: Commercial
Low Gloss ABS Unit	f)	Ball	2"	Jamesbury	Unavailability
	1226 V-106 2"				
	Jamesbury				
	BV(vb150cs111vnr				See Appendix: Commercial
Low Gloss ABS Unit	f)	Ball	2"	Jamesbury	Unavailability
	1226 V-107East 2"				
	Jamesbury				
	BV(vb150cs111vnr				See Appendix: Commercial
Low Gloss ABS Unit	f)	Ball	2"	Jamesbury	Unavailability
	1226 V-107West				
	2" Jamesbury				
	BV(vb150cs111vnr				See Appendix: Commercial
Low Gloss ABS Unit	f)	Ball	2"	Jamesbury	Unavailability
	1226 by PT N:Al-				
	287 top of V-05				
	East 1" Jamesbury				
	BV(vb150cs111vnr				See Appendix: Commercial
Low Gloss ABS Unit	f)	Ball	1"	Jamesbury	Unavailability

Voca						
	Low Gloss ABS Unit	15762	Slide	18"		Valve repacked with John Crane non-Low E packing. Low-E packing would not fit. See Appendix: Commercial Unavailability
	Low Gloss ABS Unit	72248	Ball	1"		Five rings of low E packing will not fit in this valve. See Appendix: Commercial Unavailability
\$4000 AAA BA	Low Gloss ABS Unit	16958	Ball	2"	•	Five rings of low E packing will not fit in this valve. See Appendix: Commercial Unavailability
	Low Gloss ABS Unit	66494	Control	1/2"	Research	Five rings of low E packing will not fit in this valve. See Appendix: Commercial Unavailability
	Low Gloss ABS Unit	1226 V-106 2" Jamesbury BV(vb150cs111vnr	Ball	2"	Jamesbury	See Appendix: Commercial Unavailability
	Low Gloss ABS Unit	1226 V-107 east 2" Jamesbury BV(vb150cs111vnr f)	Ball	2"	Jamesbury	See Appendix: Commercial Unavailability

L Facking					
Low Gloss ABS Unit	1226 V-107West 2" Jamesbury BV(vb150cs111vnr f)	Ball	2"	Jamesbury	See Appendix: Commercial Unavailability
Low Gloss ABS Unit	Jamesbury BV(vb150cs111vnr f)	Ball	2"	Jamesbury	See Appendix: Commercial Unavailability
Low Gloss ABS Unit	1226 recirc 2"KTMBV(vb150cs 111vnrf)	Ball	2"	KTM	See Appendix: Commercial Unavailability
Low Gloss ABS Unit	16916	Control	1"	Valtek	Five rings of low E packing will not fit in this valve. See Appendix: Commercial Unavailability
Low Gloss ABS Unit	103231	Ball	3/4"	Jamesbury	Five rings of low E packing will not fit in this valve. See Appendix: Commercial Unavailability
Low Gloss ABS Unit	15903	Ball	2"	Jamesbury	Five rings of low E packing will not fit in this valve. See Appendix: Commercial Unavailability
Low Gloss ABS Unit	103233	Tubing	1/2"	Parker	Five rings of low E packing will not fit in this valve. See Appendix: Commercial Unavailability
Low Gloss ABS Unit	108959	Control	3/4"	Flowserve/Kammer	Valve repacked with OEM packing. Five rings of low-E packing will not fit. See Appendix: Commercial Unavailability

, rackiiig					
Low Gloss ABS Unit	17605	Ball	3/4"	Flowserve/Worcester	Five rings of low E packing will not fit in this valve. See Appendix: Commercial Unavailability
Low Gloss ABS Unit	18822	Control	1/2"	Flowserve/Kammer	Five rings of low E packing will not fit in this valve. See Appendix: Commercial Unavailability
Low Gloss ABS Unit	18711	Gate	2"	Neway	Five rings of low E packing will not fit in this valve. See Appendix: Commercial Unavailability
Low Gloss ABS Unit	17661	Control	1/2"	Flowserve/Kammer	Five rings of low E packing will not fit in this valve. See Appendix: Commercial Unavailability
Low Gloss ABS Unit	17662	Control	1/2"	Flowserve/Kammer	Five rings of low E packing will not fit in this valve. See Appendix: Commercial Unavailability
Low Gloss ABS Unit	106545	Sample	1 1/2"	Strahman	Valve repacked with OEM packing. Five rings of low-E packing will not fit. See Appendix: Commercial Unavailability
Low Gloss ABS Unit	17085	Ball	2"	Jamesbury	Five rings of low E packing will not fit in this valve. See Appendix: Commercial Unavailability

					Five rings of low E packing will not
					fit in this valve. See Appendix:
Low Gloss ABS Unit	17294	Bali	1"	Jamesbury	Commercial Unavailability
LOW GIOSS ADS UTILL	1/234	Dali		samesary	
Å					Five rings of low E packing will not
					fit in this valve. See Appendix:
Low Gloss ABS Unit	17284	Ball	1"	Jamesbury	Commercial Unavailability
					Five rings of low E packing will not
					fit in this valve. See Appendix:
Low Gloss ABS Unit	17885	Ball	1/2"	Hoke	Commercial Unavailability
	A-Train Condenser				
	Liquid out to				
	receiver Tagged				See Appendix: Commercial
Low Gloss ABS Unit	VB300SS711VARF	Ball	3"	Jamesbury	Unavailability
	A-Train Condenser				
	Vapor line steam				_
A 1 	connection Tagged				See Appendix: Commercial
Low Gloss ABS Unit	VB-150SS311VNRF	Ball	1"	Jamesbury	Unavailability
	A-Train Condenser				
	Spare 2" nozzle on				
	top Tagged VB-				See Appendix: Commercial
Low Gloss ABS Unit	150SS311VNRF	Ball	2"	Jamesbury	Unavailability
Trow Gioss Web Ouit	1700000 TT A 141/1	Dull	1-	1-0111-0-0-017	

-c Packing					
					
					See Appendix: Commercial
					Unavailability
					A Low-E valve is commercially
					available for this service, however
70) 70)					due to the long lead time to
					receive such a valve, it was not
70 kg 70 kg 10 kg	A-Train Partial				available for replacement during
	Condenser Liquid				the first process shutdown. EPA
	drain line to				agreed with Dow (Dow letter sent
14 m 14 m 14 m	receiver Tagged				2/25/14, EPA response received
	VB-150SS311VNRF				3/4/14) that a non-Low E valve
	KTM EB732-32EU-				could be installed until the next
Low Gloss ABS Unit	15L/3.0	Ball	3"	KTM	process unit shutdown.
	A-Train R2 Recycle				C. A div. Commonsial
	Z4 FT Inlet Tagged			l. ,	See Appendix: Commercial
Low Gloss ABS Unit	VB-150SS311VNRF	Ball	1"	Jamesbury	Unavailability
	A-Train R2 Recycle				
	Z4 FT Outlet				See Appendix: Commercial
	Tagged VB-	. II	1"	Jamesbury	Unavailability
Low Gloss ABS Unit	150SS311VNRF	Ball	1	Jamesbury	Shavanashrey
	A-Train R2 Recycle				
	Z4 FT Upstream				
	Drain Tagged VB-				See Appendix: Commercial
Low Gloss ABS Unit	150SS311VNRF	Ball	1"	Jamesbury	Unavailability
LOW GIOSS ABS OTHE	1303331141414	10011	1-		

racking					
	A T				
	A-Train R2 Recycle				
	Z4 FT Downstream				See Appendix: Commercial
	Drain Tagged VB-				· · · · · · · · · · · · · · · · · · ·
Low Gloss ABS Unit	15000011	Ball	1"	Jamesbury	Unavailability
	A-Train R2 Recycle				
	Z4 FT Bypass				s a Pro-Communical
	Tagged VB-				See Appendix: Commercial
Low Gloss ABS Unit	150SS311VNRF	Ball	1"	Jamesbury	Unavailability
	A-Train R2 Recycle				See Appendix: Commercial
	Z4 CV Inlet Tagged				
ow Gloss ABS Unit	VB-150SS311VNRF	Ball	1"	Jamesbury	Unavailability
	A-Train R2 Recycle				
	Z4 CV Outlet				a de la constant
	Tagged VB-				See Appendix: Commercial
Low Gloss ABS Unit	150SS311VNRF	Ball	1"	Jamesbury	Unavailability
	A-Train R2 Recycle				
	Z4 CV Drain				
	Tagged VB-				See Appendix: Commercial
Low Gloss ABS Unit	150SS311VNRF	Ball	1"	Jamesbury	Unavailability
	A-Train R2 Recycle				
	Z4 CV Bypass				
	Tagged VB-				See Appendix: Commercial
Low Gloss ABS Unit	150SS311VNRF	Ball	1"	Jamesbury	Unavailability
	A-Train R2 Recycle				C. A
	Z5 FT Inlet Tagged				See Appendix: Commercial
Low Gloss ABS Unit	VB-150SS311VNRF	Bali	1"	Jamesbury	Unavailability

				T	
	A-Train R2 Recycle				
	Z5 FT Outlet				D. Commontal
	Tagged VB-				See Appendix: Commercial
Low Gloss ABS Unit	150SS311VNRF	Ball	1"	Jamesbury	Unavailability
	A-Train R2 Recycle				
	Z5 FT Upstream				
	Drain Tagged VB-				See Appendix: Commercial
Low Gloss ABS Unit	150SS311VNRF	Ball	1"	Jamesbury	Unavailability
	A-Train R2 Recycle				
	Z5 FT Downstream				_
8 6	Drain Tagged VB-				See Appendix: Commercial
Low Gloss ABS Unit	150SS311VNRF	Ball	1"	Jamesbury	Unavailability
	A-Train R2 Recycle				
	Z5 FT Bypass				
	Tagged VB-				See Appendix: Commercial
Low Gloss ABS Unit	150SS311VNRF	Ball	1"	Jamesbury	Unavailability
	A-Train R2 Recycle				
	Z5 CV Inlet Tagged				See Appendix: Commercial
Low Gloss ABS Unit	VB-150SS311VNRF	Ball	1"	Jamesbury	Unavailability
	A-Train R2 Recycle				
	Z5 CV Outlet				
	Tagged VB-				See Appendix: Commercial
Low Gloss ABS Unit	150SS311VNRF	Ball	1"	Jamesbury	Unavailability
	A-Train R2 Recycle				
	Z5 CV Drain				
	Tagged VB-				See Appendix: Commercial
Low Gloss ABS Unit	150SS311VNRF	Ball	1"	Jamesbury	Unavailability

A-Train R2 Recycle Z5 CV Bypass Tagged VB- 150SS311VNRF	Ball	1"	Jamesbury	See Appendix: Commercial Unavailability
				Can Annandis Commercial
		- D	1	See Appendix: Commercial Unavailability
	Ball	1"	Jamesbury	Unavailability
1				
				See Appendix: Commercial
1	- II	4.0	la ma o churu r	Unavailability
150SS311VNRF	Ball	1	Jamesbury	Offavailability
A Train D3 Pocycle				
				See Appendix: Commercial
	Rall	1"	Jamesbury	Unavailability
1303331171717	Dun			
A-Train R2 Recycle		Î		
· · · · · · · · · · · · · · · · · · ·				
Drain Tagged VB-				See Appendix: Commercial
150SS311VNRF	Ball	1"	Jamesbury	Unavailability
A Train P2 Pocycle				
				See Appendix: Commercial
*=	Ball	1"	Jamesbury	Unavailability
155555711111			,	
A-Train R2 Recycle				
•				See Appendix: Commercial
	1	1"	Jamesbury	Unavailability
	Z5 CV Bypass Tagged VB- 150SS311VNRF A-Train R2 Recycle Z6 FT Inlet Tagged VB-150SS311VNRF A-Train R2 Recycle Z6 FT Outlet Tagged VB- 150SS311VNRF A-Train R2 Recycle Z6 FT Upstream Drain Tagged VB- 150SS311VNRF A-Train R2 Recycle Z6 FT Downstream Drain Tagged VB- 150SS311VNRF A-Train R2 Recycle Z6 FT Bypass Tagged VB- 150SS311VNRF A-Train R2 Recycle Z6 FT Bypass Tagged VB- 150SS311VNRF A-Train R2 Recycle Z6 FT Bypass Tagged VB- 150SS311VNRF	Z5 CV Bypass Tagged VB- 150SS311VNRF A-Train R2 Recycle Z6 FT Inlet Tagged VB-150SS311VNRF Ball A-Train R2 Recycle Z6 FT Outlet Tagged VB- 150SS311VNRF Ball A-Train R2 Recycle Z6 FT Upstream Drain Tagged VB- 150SS311VNRF Ball A-Train R2 Recycle Z6 FT Downstream Drain Tagged VB- 150SS311VNRF Ball A-Train R2 Recycle Z6 FT Downstream Drain Tagged VB- 150SS311VNRF Ball A-Train R2 Recycle Z6 FT Bypass Tagged VB-	Z5 CV Bypass Tagged VB- 150SS311VNRF A-Train R2 Recycle Z6 FT Inlet Tagged VB-150SS311VNRF A-Train R2 Recycle Z6 FT Outlet Tagged VB- 150SS311VNRF Ball 1" A-Train R2 Recycle Z6 FT Upstream Drain Tagged VB- 150SS311VNRF Ball 1" A-Train R2 Recycle Z6 FT Downstream Drain Tagged VB- 150SS311VNRF Ball 1" A-Train R2 Recycle Z6 FT Bypass Tagged VB- 150SS311VNRF Ball 1" A-Train R2 Recycle Z6 FT Bypass Tagged VB- 150SS311VNRF Ball 1" A-Train R2 Recycle Z6 FT Bypass Tagged VB- 150SS311VNRF Ball 1"	Z5 CV Bypass Tagged VB- 150SS311VNRF A-Train R2 Recycle Z6 FT Inlet Tagged VB-150SS311VNRF A-Train R2 Recycle Z6 FT Outlet Tagged VB- 150SS311VNRF Ball 1" Jamesbury A-Train R2 Recycle Z6 FT Upstream Drain Tagged VB- 150SS311VNRF Ball 1" Jamesbury A-Train R2 Recycle Z6 FT Downstream Drain Tagged VB- 150SS311VNRF Ball 1" Jamesbury A-Train R2 Recycle Z6 FT Bownstream Drain Tagged VB- 150SS311VNRF Ball 1" Jamesbury A-Train R2 Recycle Z6 FT Bypass Tagged VB- 150SS311VNRF Ball 1" Jamesbury

: Packing					
	A-Train R2 Recycle Z6 CV Outlet				
	Tagged VB-				See Appendix: Commercial
Low Gloss ABS Unit	150SS311VNRF	Ball	1"	Jamesbury	Unavailability
LOW GIOSS ABS OTHE	A-Train R2 Recycle			, , , , , , , , , , , , , , , , , , , ,	
	Z6 CV Drain				
	Tagged VB-		ļ		See Appendix: Commercial
Low Gloss ABS Unit	150SS311VNRF	Ball	1"	Jamesbury	Unavailability
	A-Train R2 Recycle				
	Z6 CV Bypass	<u> </u>			
	Tagged VB-				See Appendix: Commercial
Low Gloss ABS Unit	150SS311VNRF	Ball	1"	Jamesbury	Unavailability
					Five rings of low E packing will not
					fit in this valve. See Appendix:
Low Gloss ABS Unit	17452	Ball	2"	Jamesbury	Commercial Unavailability
EOW GIOSS ARES OTHE					
					Five rings of low E packing will not
					fit in this valve. See Appendix:
Low Gloss ABS Unit	102286	Control	1/2"	Research	Commercial Unavailability
7 1 1					Five rings of low E packing will not
					fit in this valve. See Appendix:
Low Gloss ABS Unit	17862	Control	1/2"	Flowserve/Kammer	Commercial Unavailability
LOW GIOSS ABS OTHE	17002	Control	-/-		
					Five rings of low E packing will not
					fit in this valve. See Appendix:
Low Gloss ABS Unit	97707	Control	1/2"	Valtek	Commercial Unavailability
	B-Train SVT Tank				See Appendix: Commercial
Low Gloss ABS Unit	Bottom Drain	Ball	6"	KTM	Unavailability

i deniib					
	B-Train Devo 1				
	Recycle Out P-				See Appendix: Commercial
.ow Gloss ABS Unit	5001A PI Isolation	Rail	1/2"	Jamesbury	Unavailability
OW GIOSS ADS OTHE	B-Train Devo 1	Dan			
	Recycle Out P-				See Appendix: Commercial
ow Gloss ABS Unit	5001A PI Drain	Ball	1/2"	Jamesbury	Unavailability
OW GIOSS ABS Offic	B-Train Devo 1		-7-	,	
	Recycle Out P-				See Appendix: Commercial
Low Gloss ABS Unit	5001A Discharge	Ball	1"	Jamesbury	Unavailability
THIS CON SCORE WAY	30017 Discharge	Dan	-		
	B-Train Devo 1				
	Recycle Out P-				See Appendix: Commercial
ow Gloss ABS Unit	5001B Pl Isolation	Ball	1/2"	Jamesbury	Unavailability
	B-Train Devo 1				
	Recycle Out P-				See Appendix: Commercial
_ow Gloss ABS Unit	5001B PI Drain	Ball	1/2"	Jamesbury	Unavailability
	B-Train Devo 1				
	Recycle Out P-				See Appendix: Commercial
Low Gloss ABS Unit	5001B Discharge	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 1				
	Recycle Out Drain				See Appendix: Commercial
_ow Gloss ABS Unit	<u> </u>	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 1				
	Recycle Out				See Appendix: Commercial
Low Gloss ABS Unit	Sampler Inlet	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 1				
	Recycle Out				See Appendix: Commercial
Low Gloss ABS Unit	Sampler Outlet	Ball	1"	Jamesbury	Unavailability

ABS Low Gloss

Appendix V.G.34 Commercial Unavailability of a Low-E Valve or

Low-E Packing

		I	l	T	
報	B-Train Devo 1				C A di Commonsist
#1 14	Recycle Out				See Appendix: Commercial
Low Gloss ABS Unit	1 : / 1	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 1				
	Recycle Out				
14 201 202	Sampler (Not new -				See Appendix: Commercial
Low Gloss ABS Unit	reused)	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 1				a li Canananial
A. (4)	Recycle Out Filter				See Appendix: Commercial
Low Gloss ABS Unit	Inlet	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 1				
	Recycle Out Filter				See Appendix: Commercial
Low Gloss ABS Unit	Inlet Drain	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 1				
	Recycle Out Filter				See Appendix: Commercial
Low Gloss ABS Unit	Outlet Drain	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 1				la a la Garage
	Recycle Out Filter				See Appendix: Commercial
Low Gloss ABS Unit	Outlet	Ball	1"	Jamesbury	Unavailability
### ### ### ### ### ### ### ### #### ####	B-Train Devo 1				
	Recycle Out Filter				See Appendix: Commercial
Low Gloss ABS Unit	By-pass	Ball	1"	Jamesbury	Unavailability
100 100 100	B-Train Devo 1				a dia Campanial
10.00 W 10.00 20.00 20.00	Recycle Out				See Appendix: Commercial
Low Gloss ABS Unit	Flowmeter Inlet	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 1				c a Por C constal
	Recycle Out				See Appendix: Commercial
Low Gloss ABS Unit	Flowmeter Drain	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 1				
	Recycle Out				See Appendix: Commercial
Low Gloss ABS Unit	Flowmeter Outlet	Ball	1"	Jamesbury	Unavailability

B-Train Devo 1		***************************************		
· ·				See Appendix: Commercial
-	Rall	1"	lameshurv	Unavailability
pass	Dan		341,100,041,	
B-Train Devo 1				
Recycle Out				See Appendix: Commercial
Control Valve Inlet	Ball	1"	Jamesbury	Unavailability
B-Train Devo 1				
Recycle Out				
Control Valve				See Appendix: Commercial
Drain	Ball	1"	Jamesbury	Unavailability
B-Train Devo 1		1		
Recycle Out				See Appendix: Commercial
Control Valve	Ball	1"	Jamesbury	Unavailability
B-Train Devo 1				
Recycle Out				
Control Valve By-				See Appendix: Commercial
pass	Ball	1"	Jamesbury	Unavailability
B-Train Devo 1				
Recycle Out Line				
Drain On By-pass				See Appendix: Commercial
line	Ball	1"	Jamesbury	Unavailability
R-Train Devo 2				
				See Appendix: Commercial
1 '	Ball	1/2"	lamesbury	Unavailability
	Dall		Janico Na. y	
				See Appendix: Commercial
5001A PI Drain	Ball	1/2"	Jamesbury	Unavailability
	Recycle Out Control Valve Inlet B-Train Devo 1 Recycle Out Control Valve Drain B-Train Devo 1 Recycle Out Control Valve B-Train Devo 1 Recycle Out Control Valve By- pass B-Train Devo 1 Recycle Out Line Drain On By-pass line B-Train Devo 2 Recycle Out P- 5001C PI Isolation B-Train Devo 2 Recycle Out P-	Recycle Out Flowmeter By- pass Ball B-Train Devo 1 Recycle Out Control Valve Inlet B-Train Devo 1 Recycle Out Control Valve Drain Ball B-Train Devo 1 Recycle Out Control Valve Ball B-Train Devo 1 Recycle Out Control Valve Ball B-Train Devo 1 Recycle Out Control Valve By- pass Ball B-Train Devo 1 Recycle Out Line Drain On By-pass line B-Train Devo 2 Recycle Out P- 5001C PI Isolation B-Train Devo 2 Recycle Out P-	Recycle Out Flowmeter By- pass Ball 1" B-Train Devo 1 Recycle Out Control Valve Inlet B-Train Devo 1 Recycle Out Control Valve Drain B-Train Devo 1 Recycle Out Control Valve Ball 1" B-Train Devo 1 Recycle Out Control Valve Ball 1" B-Train Devo 1 Recycle Out Control Valve By- pass Ball 1" B-Train Devo 1 Recycle Out Line Drain On By-pass line B-Train Devo 2 Recycle Out P- 5001C PI Isolation B-Train Devo 2 Recycle Out P-	Recycle Out Flowmeter By- pass Ball 1" Jamesbury B-Train Devo 1 Recycle Out Control Valve Inlet B-Train Devo 1 Recycle Out Control Valve Drain B-Train Devo 1 Recycle Out Control Valve Ball 1" Jamesbury B-Train Devo 1 Recycle Out Control Valve Ball 1" Jamesbury B-Train Devo 1 Recycle Out Control Valve By- pass Ball 1" Jamesbury B-Train Devo 1 Recycle Out Line Drain On By-pass line Ball 1" Jamesbury B-Train Devo 2 Recycle Out P- 5001C PI Isolation Ball 1/2" Jamesbury

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Low-E Packing

	B-Train Devo 2				
	Recycle Out P-				See Appendix: Commercial
Low Gloss ABS Unit	5001A Discharge	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 2				
	Recycle Out P-				See Appendix: Commercial
Low Gloss ABS Unit	5001B PI Isolation	Ball	1/2"	Jamesbury	Unavailability
	B-Train Devo 2				
	Recycle Out P-				See Appendix: Commercial
Low Gloss ABS Unit	5001B Pl Drain	Ball	1/2"	Jamesbury	Unavailability
	B-Train Devo 2				
	Recycle Out P-				See Appendix: Commercial
Low Gloss ABS Unit	5001B Discharge	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 2				
	Recycle Out Drain				See Appendix: Commercial
Low Gloss ABS Unit	Above P-5001A/B	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 2				
	Recycle Out				See Appendix: Commercial
Low Gloss ABS Unit	Sampler Inlet	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 2				
	Recycle Out				See Appendix: Commercial
Low Gloss ABS Unit	Sampler Outlet	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 2			ì	
	Recycle Out				See Appendix: Commercial
Low Gloss ABS Unit	Sampler By-pass	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 2				
	Recycle				See Appendix: Commercial
Low Gloss ABS Unit	OutSampler	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 2				
	Recycle Out Filter				See Appendix: Commercial
Low Gloss ABS Unit	Inlet	Ball	1"	Jamesbury	Unavailability

······································	B-Train Devo 2				
	Recycle Out Filter				See Appendix: Commercial
ow Gloss ABS Unit	Inlet Drain	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 2				
	Recycle Out Filter				See Appendix: Commercial
Low Gloss ABS Unit	Outlet Drain	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 2				
	Recycle Out Filter				See Appendix: Commercial
ow Gloss ABS Unit	Outlet	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 2				
	Recycle Out Filter				See Appendix: Commercial
ow Gloss ABS Unit	By-pass	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 2				
	Recycle Out				See Appendix: Commercial
ow Gloss ABS Unit	Isolation to PI	Ball	1/2"	Jamesbury	Unavailability
	B-Train Devo 2				
	Recycle Out Drain				See Appendix: Commercial
ow Gloss ABS Unit	to PI	Ball	1/2"	Jamesbury	Unavailability
	B-Train Devo 2				
	Recycle Out				See Appendix: Commercial
ow Gloss ABS Unit	Flowmeter Inlet	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 2				
	Recycle Out				See Appendix: Commercial
Low Gloss ABS Unit	Flowmeter Drain	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 2				
	Recycle Out				See Appendix: Commercial
Low Gloss ABS Unit	Flowmeter Outlet	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 2				
	Recycle Out				
	Flowmeter By-				See Appendix: Commercial
ow Gloss ABS Unit	pass	Ball	1"	Jamesbury	Unavailability

	B-Train Devo 2				
	Recycle Out				See Appendix: Commercial
Low Gloss ABS Unit	Control Valve Inlet	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 2				
(Recycle Out				
	Control Valve				See Appendix: Commercial
Low Gloss ABS Unit	Drain	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 2				
	Recycle Out				See Appendix: Commercial
Low Gloss ABS Unit	Control Valve	Ball	1"	Jamesbury	Unavailability
	B-Train Devo 2				
	Recycle Out				
	Control Valve By-				See Appendix: Commercial
Low Gloss ABS Unit	pass	Ball	1"	Jamesbury	Unavailability
					Five rings of low E packing will not
					fit in this valve. See Appendix:
Low Gloss ABS Unit	37534	Ball	3/4"	Jamesbury	Commercial Unavailability

Ethocel ™ cellulose ethers

Appendix V.G.35 Records of Low-E Valves and Low-E Packing

35. Records of Low-E Valves and Low-E Packing. Prior to installing any Low-E Valves or Low-E Packing, or if not possible before installation, then as soon as possible after installation, Dow shall secure from each manufacturer documentation that demonstrates that the proposed valve or packing technology meets the definition of "Low-E Valve" and/or "Low-E Packing." Dow shall make the documentation available upon request.

Covered Process Unit	Valve Tag # and/or Description	Valve Type	Size	Manufacturer
Ethocel ™ cellulose				Valtek - repacked with five rings of Chesterton
ethers	100736	Control	2"	1724E Low E packing
Ethocel ™ cellulose				
ethers	100227	Full Port Ball	2"	Velan
Ethocel ™ cellulose				
ethers	101525	Full Port Ball	2"	Velan
Ethocel ™ cellulose				
ethers	84912	Full Port Ball	1 1/2"	Velan
Ethocel ™ cellulose				
ethers	101551	Full Port Ball	1 1/2"	Velan
Ethocel ™ cellulose				
ethers	101541	Full Port Ball	2"	Velan
Ethocel ™ cellulose				Valtek - repacked with five rings of Chesterton
ethers	100826	Control	1"	1724E Low E packing

ABS Low Gloss

Appendix V.G.35 Records of Low-E Valves and Low-E Packing

V.G.35 35. Records of Low-E Valves and Low-E Packing. Prior to installing any Low-E Valves or Low-E Packing, or if not possible before installation, then as soon as possible after installation, Dow shall secure from each manufacturer documentation that demonstrates that the proposed valve or packing technology meets the definition of "Low-E Valve" and/or "Low-E Packing." Dow shall make the documentation available upon request.

Covered Process Unit	Valve Tag # and/or Description	Valve Type	Size	Manufacturer
Low Gloss ABS Unit	102220	Gate	1/2"	SWI
Low Gloss ABS Unit	97682	Full Port Ball	1"	Velan
Low Gloss ABS Unit	15597	Full Port Ball	1"	Velan
Low Gloss ABS Unit	3793	Full Port Ball	3"	Velan
Low Gloss ABS Unit	3390	Full Port Ball	2"	Velan
Low Gloss ABS Unit	A-Train Condenser Drain on liquid out line Tagged VG-800SS2BST	Gate	1"	swi
Low Gloss ABS Unit	16977	Full Port Ball	2"	Velan
Low Gloss ABS Unit	B-Train SVT N Tank PSV Drain	Gate	3/4"	SWI
Low Gloss ABS Unit	B-Train SVT S Tank PSV Drain	Gate	1"	SWI
Low Gloss ABS Unit	15923	Gate	1/2"	SWI